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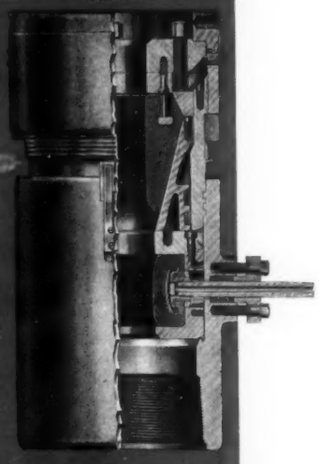

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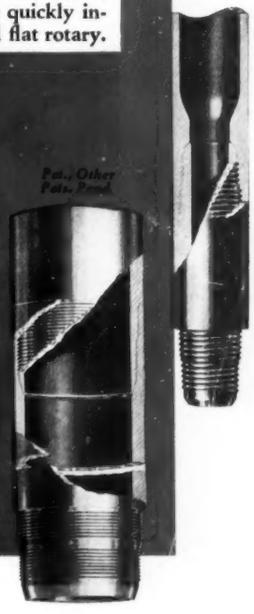

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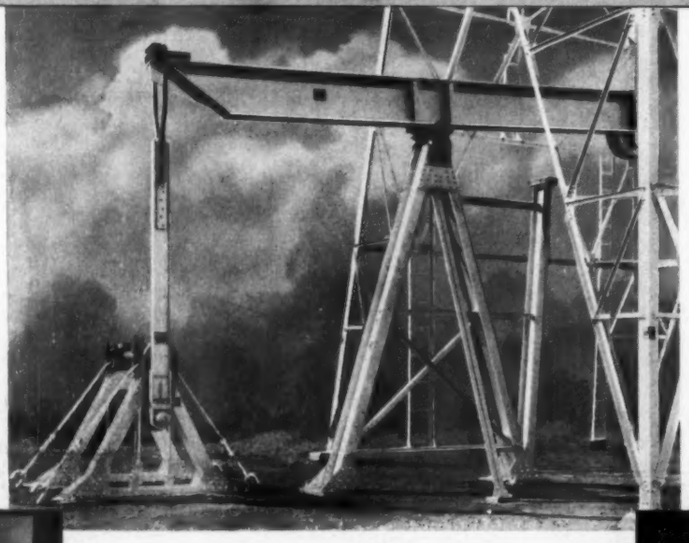

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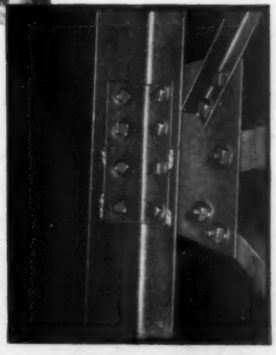
Inside view of Joint with One Gusset plate removed — showing how inside Splice Plate is spot-welded to leg.



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THE OIL AND GAS JOURNAL

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February 7, 1935

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OIL MAN'S CALENDAR

February

12-14 — Columbus, Ohio, Ohio Petroleum Marketers Association, annual dinner. Deshler-Wallick Hotel.

18-21—New York, Petroleum Division, A.I.M.E. (A.I.M.E. annual meeting).

20-21—Peoria, Ill., Illinois Petroleum Marketers Association, Pere Marquette Hotel.

March

21-23—Wichita, Kans., American Association of Petroleum Geologists, annual meeting.

April

2-3—New York, National Oil Burner Dealers Association, Pennsylvania Hotel.

8-13 — Houston, Tex., Oil Equipment and Engineering Exposition.

11-13—Dallas, Tex., Petroleum Industry Electrical Association, Baker Hotel.

22—New York, American Chemical Society, semiannual meeting.

(?) — Wichita, Kans., Kansas Oil Men's Association.

May

1-3—Tulsa, Natural Gasoline Association of America, Hotel Tulsa.

6-9 — Memphis, Tenn., Natural Gas Department, A.G.A., Peabody Hotel.

8-11—Tulsa, Oil and Gas Power Division of A.S.M.E., Mayo Hotel.

14-16—Tulsa, American Petroleum Institute, fifth mid-year meeting, Mayo Hotel.

June

20-21 — State College, Pa., Pennsylvania Grade Crude Oil Association, annual meeting.

24-28 — Detroit, Mich., American Society for Testing Materials, annual meeting, Book Cadillac Hotel.

November

4-5—Dallas, Tex., I.P.A.A. Annual Convention.

11-14 — Los Angeles, sixteenth annual meeting, A.P.I., Los Angeles Biltmore Hotel.

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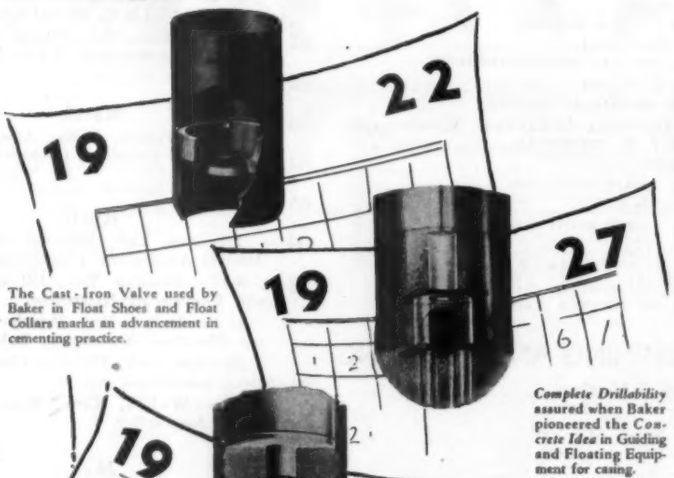
GUIDING, FLOATING *and* CEMENTING EQUIPMENT

Since the introduction of the Baker Pattern Casing shoe in 1907 Baker has led in the timely development of practical and efficient casing guiding, floating and cementing equipment. It is to be expected that Baker should continue to lead. For more than 27 years Baker has studied the changing needs of the oil industry for safely landing and cementing strings of casing, has concentrated on solving the problems presented by the trend to deeper drilling. As a result Baker Cement Equipment today represents the best possible combination of the three essentials for the safe and proper guiding, floating and cementing of casing strings of any length: Strength — Valve Efficiency — Drillability.

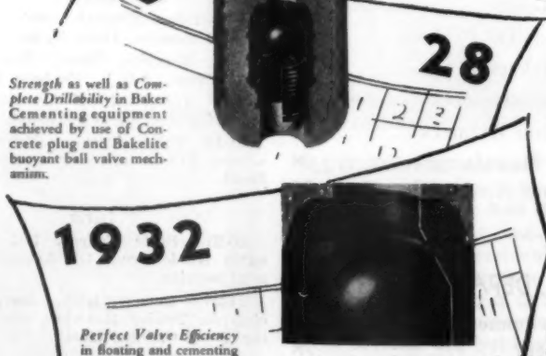
The future will bring demands for new tools to meet new requirements. Accepting its responsibility as a leader, Baker will always strive to anticipate all practical demands with essentially useful, efficient, *field tested* equipment as it has done since the pioneering days of 1907.



The Cast-Iron Valve used by Baker in Float Shoes and Float Collars marks an advancement in cementing practice.

Complete Drillability assured when Baker pioneered the *Concrete Idea* in Guiding and Floating Equipment for casing.

Strength as well as *Complete Drillability* in Baker Cementing equipment achieved by use of Concrete plug and Bakelite buoyant ball valve mechanism.



Perfect Valve Efficiency in floating and cementing obtained by the narrow *Rubber Seal* which makes the valve *Double Sealing*.

In most cases the fine fragments of concrete and Bakelite are readily distinguishable to show when the plug has been drilled through. However, as some operators desired a special "indicator" for use in certain localities, Baker in March of 1934 placed in the field Cement Equipment with the plug made of RED concrete. The coloring used in no way affects the essential qualities of the concrete, and this equipment is available at no extra cost.

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for guiding—floating—cementing casing

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Drop in Production in East Texas Further Proof State Enforcement Activities Are Successful

By ANDREW M. ROWLEY

WHILE the policy of many operators of producing most of their allowables early in the month was largely responsible for the substantial decline in production in Oklahoma during the past week, the fact that East Texas showed a decrease in actual production and that a material drop was registered in California served to remove much of the uncertainty which still prevailed regarding "hot" oil operations in East Texas and the tendency in sections of California to greatly exceed allowables. Active efforts of the attorney general's department in Texas in opposing the issuance of injunctions against the Railroad Commission and in procuring restraining orders against shipments of oil without tenders is regarded as an especially encouraging sign. It is said, state district courts granted injunctions without the state's having an opportunity to present evidence.

A better feeling pervades the Atlantic Coast refined oil market with the trend towards normal prices continuing and marketers unable to find any evidence of dumping of East Texas products as a result of injunctions issued permitting shipment of stored gasoline and crude. Conditions in East Texas are a vital factor in the Eastern refined oil market and also exert a large influence on the foreign market. Should the industry become assured of strict enforcement of regulations and the prevention of shipments without approved tenders, a further strengthening of the refined market would result.

All indications point to an exceptionally active year in the producing branch of the industry. Close observers interpret personnel readjustments in a number of companies as evidence of the desire upon the part of certain units at least to improve their positions from the standpoint of future crude oil reserves. Leasing activity in Oklahoma and Kansas has been so pronounced operators claim they are having difficulty in obtaining acreage in many sections designed to get a good play soon. The Fitts Pool in Oklahoma continues as the most prolific new producing area with enough locations established to insure a long, continuous drilling campaign there. Considerable interest is shown in activity centering around the Altus section of Jackson County, Oklahoma where the Gypsy Oil Co. recently opened a pool showing for both oil and gas production.

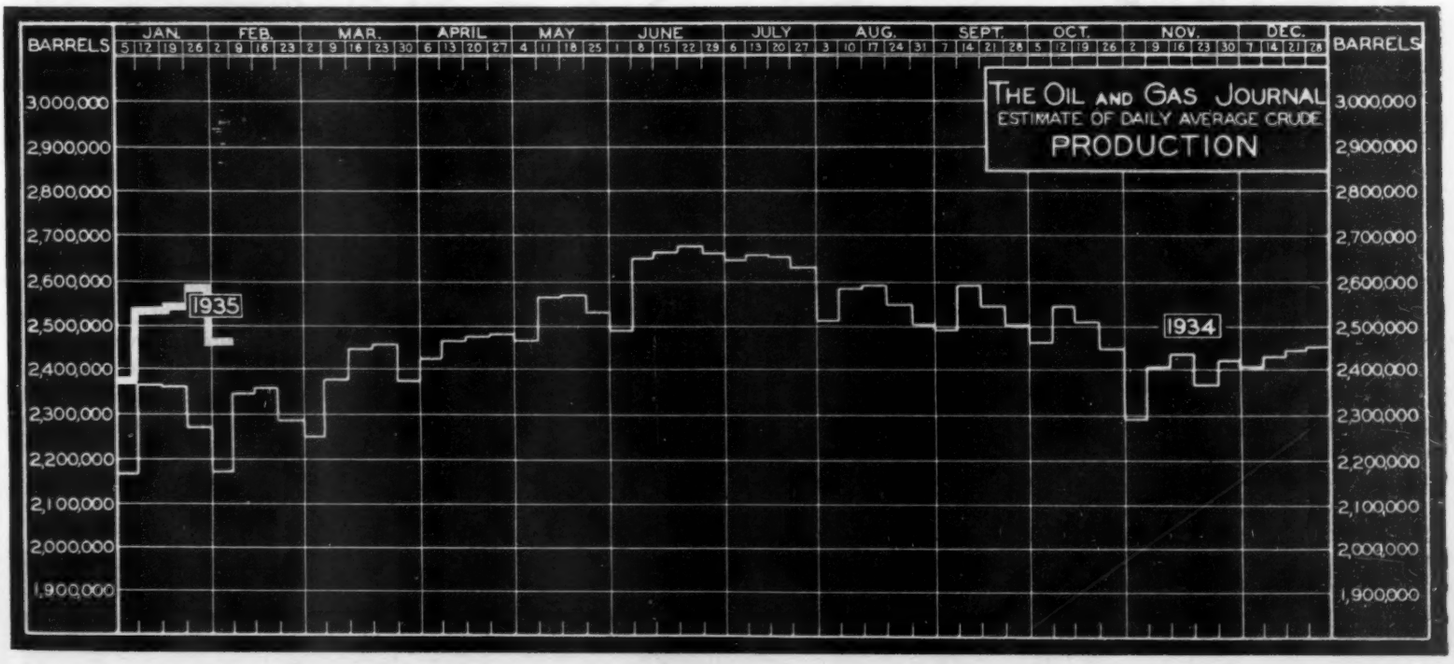
The Haury-Burrton Pool in Kansas continues to hold the limelight in activities in that state with good completions stimulating further development. Michigan established a new high record in production last week, the previous high daily average for a week being in May, 1934, with an average of 35,156 barrels daily. The probable discovery of a new production area east of the Montebello Pool in the Los Angeles basin in California may have an important effect on the production situation in that state.

Crude Oil Production in the United States

Estimated daily average production for the week ending February 2, a comparison with previous week and the Federal allowables follow:

		Federal allowable	
	Feb. 2	February	Jan. 26
Oklahoma—			
Oklahoma City	117,600	.....	186,800
Seminole-St. Louis	75,310	.....	88,550
Remainder of State	248,415	.....	234,600
Total Oklahoma	441,325	497,100	509,950
East Texas—			
Lathrop	163,425	.....	166,990
Kilgore	156,310	.....	158,610
Joiner	135,468	.....	141,527
Total East Texas	455,203	.....	467,127
West Texas	148,427	.....	148,466
North Central Texas	88,453	.....	88,293
Texas Panhandle	60,534	.....	60,895
East Central Texas	51,252	.....	51,534
Gulf Coast—Texas	176,425	.....	175,654
Southwest Texas	58,445	.....	57,803
Total State of Texas	1,038,739	1,031,700	1,049,832
Kansas	137,225	138,600	140,975
North Louisiana	22,835	.....	23,185
Gulf Coast—Louisiana	91,776	.....	88,678
Total Louisiana	114,611	109,500	111,863
Arkansas	31,490	32,000	31,395
Eastern Fields (except Michigan)	101,000	100,700	103,000
Michigan	36,084	30,000	34,636
Rocky Mountain area	93,630	97,500	96,490
California—			
Santa Fe Springs	35,600	.....	37,200
Long Beach	53,500	.....	61,750
Mountain View	20,100	.....	22,250
Elwood	8,000	.....	7,900
Kettleman Hills	74,000	.....	74,500
Remainder of State	286,100	.....	305,500
Total California	477,300	488,600	509,100
Total United States	2,471,404	2,526,100	2,587,231

Decrease 115,827 Bbls. Daily.



The Bulletin Board

The Connally Bill will be reported on by the Cole subcommittee on Thursday, Feb. 7, according to Chairman William P. Cole, Jr. He said the committee's report will only cover the bill and not include anything else. It is expected the report will favor passage of the bill, which should insure quick action on the measure.

•

An interstate compact for oil producing states will be considered at a conference of governors of these states called by Gov. E. W. Marland, of Oklahoma, to meet at the Adolphus Hotel, Dallas, Texas, Feb. 15.

•

A pipe line to transport natural gas from the Texas Panhandle to St. Louis and Detroit is proposed in a plan presented to Harold L. Ickes, Public Works Administrator, who seems to view the matter favorably. He says the line would cost $50,000,000.

•

Court action in Texas in granting injunctions restraining the Railroad Commission from interfering with shipments of stored crude and products, without notice, or hearing to the state, is condemned by Attorney General McCraw of Texas. Mr. McCraw procured orders restraining the railroads from transporting oil without state tenders.

•

Vulcanized rubber applied to pipe to protect it against corrosion and soil stress is being tried in an experiment conducted by the Lone Star Gas Company and the Goodrich Rubber Co. A section of 100 feet of pipe covered with a one-fourth-inch thick coating of vulcanized rubber has been laid in a section where corrosion has been especially severe.

•

Better prices for Pennsylvania grade crude oil was the problem discussed by operators from Pennsylvania where several proposals were advanced. One was the extension of the ratable contract between producers and pipe lines, which now covers the water-flood areas, to the remainder of the Pennsylvania oil regions. Another was to establish a purchase and storage agency to carry over off-season production. A third was to adopt a supplemental regional oil code under Federal authorities to restrict actual production.

•

Continued drilling for five or six months is assured in the Fitts Pool in Oklahoma by approximately 350 locations to test the now proven area while good showings made in wildcats indicate other productive sections may be found before the present field is drilled up. Geologists are studying the system of faulting prevalent in the Fitts Pool. Shales encountered in drilling present problems to production engineers, especially when these shales mix with the mud used as the shales change the viscosity of the mud.

Mexico has cancelled all concessions applying to lands granted the Mexican Eagle Petroleum Co., a Shell subsidiary, in 1906. The company asserts the cancellation will not affect its production which comes mainly from private lands leased by the company.

•

Russian oil production established a new high record during 1934, according to preliminary figures which show an output of 463,000 barrels daily last year. The previous record was established in 1931.

•

Mill wrapped and coated pipe for combating corrosion and soil stress seems to be gaining in favor with shipments totaling more than 5,680 miles from six large steel mills where coating and wrapping plants have been installed since the first installation in August, 1928. A patented method of loading in railroad cars prevents damage to coatings and wrappings in transit.

•

100 octane gasoline containing less than 3 cc. of tetraethyl lead will soon be available in commercial quantities. Experimental research under army supervision indicates definite benefits are obtainable in speed and mileage and that a gasoline of this quality and octane rating may soon become the standard for the fighting aviation grade.

•

Efficient fractionation characterizes operation of the natural gasoline plant of the Skelly Oil Company at Lyman, Okla. The unit is unique for the Mid-Continent because of the complete absence of absorption in processing the gas.

•

Labor in the petroleum industry has fared exceptionally well under the petroleum code according to a statement made before the National Industrial Recovery Board by H. H. Anderson, who presented facts and figures showing a substantial increase in employment and wages.

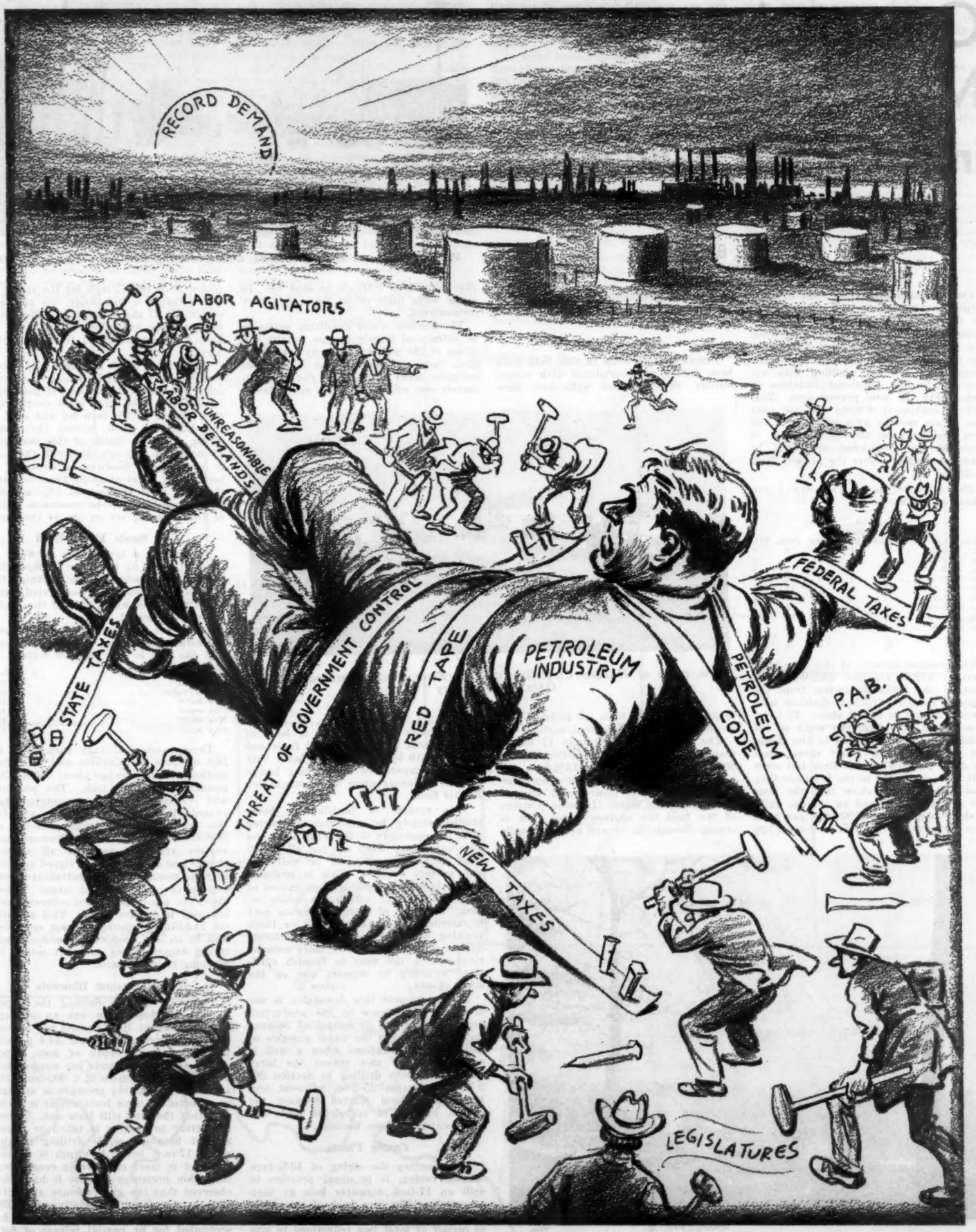
•

New motor fuels introduced by three large refining companies have distillation curves containing oddly shaped bulges and breaks to indicate a wide divergence of opinion of their designers as to what constitutes "quality". All three fuels would be judged better than the present average grade from standpoint of easy starting, acceleration and octane rating but the rapid rise between the 90 per cent point and the endpoint is reminiscent of oldfashioned grades. Dr. G. G. Brown contends a relatively high endpoint is not objectionable providing the major part of the curve is satisfactory.

•

E. J. Nicklos, vice president, director and manager of the drilling and production department of the Continental Oil Co., has resigned to become an independent operator and consultant in production problems.

Dawn Arouses Modern Gulliver



—Drawn exclusively for The Oil and Gas Journal

Greatest Activity in Mid-Continent Region in Fitts Field, Oklahoma

View of business section of Ada, Okla., looking east from Frisco tracks

By L. G. E. BIGNELL
Petroleum Engineering Editor

One of the most active field developments in this country is now under way in the Fitts Pool, southern Pontotoc County, Oklahoma. Wells having average potentials of more than 3,500 bbls. per day have been completed there and many more are now drilling with approximately 350 additional locations to test within the now proven area. This assures continued drilling for the next five or six months with wildcats in the area making good showings, and it is probable that additional area will be found productive before the present field is drilled up.

The activities as of February 1 are tabulated below:

Location—	Producers— Bromide	Shallow	Gas	Drlg.	Ttl.
Sec. 19-2-7e	1	1	0	1	3
Sec. 24-2-7e	0	1	0	0	1
Sec. 28-2-7e	0	0	0	1	1
Sec. 29-2-7e	4	0	1	4	9
Sec. 30-2-7e	19	1	4	19	43
Sec. 31-2-7e	1	0	0	1	2
Sec. 24-2-6e	0	1	0	0	1
Sec. 25-2-6e	15	1	2	17	36
Sec. 36-2-6e	1	0	0	5	6
	41	5	8	48	102

The greatest activity at this time is in Sections 30-2-7e and Sec. 25-2-6e, where most of the wells producing from the Simpson section have been finished with general results as stated above. It is interesting to note that the wells so far finished in the Fitts Pool in the Simpson formation have about three times the daily potential of the first 100 wells that were completed in the Seminole City Pool. The records show that the first 100 Seminole wells had an average daily production of about 1,400 bbls. per well. This indicates the importance of the Fitts Field as a producing area and all possible productive formations have not as yet been fully tested.

Drilling Practice

Practically all wells in this field have been drilled and completed with rotary outfits. Some shallow wells have been drilled with cable tools, or finished and cleaned out with cable tool outfits.

New town of Harden City, Sec. 29-2-7e Fitts Pool, Pontotoc County, Okla., on February 1

The hole started is usually 17 inches diameter and it is carried to from 650 to 800 feet and cased with 13⅜-inch 61-pound casing, cemented full length behind the casing to insure good shut of gas and surface water. In some portions of the field the surface water flow is strong enough to create artesian wells that have been difficult to shut off. In other wells little or no water has been encountered.

The surface water condition seems to be influenced largely by the relative position of the well to a nearby fault. The area now occupied by the Fitts Pool contains many faults that run approximately east and west. These minor faults are within the boundaries of the so-called Frank's graben that is bounded on the north by the Stonwall fault and on the south by the Choctaw fault, both of major importance and having had a marked influence upon oil accumulation in this field.

This system of faulting is being studied closely by geologists connected with the operators in the Fitts Pool and adjacent areas. They are not all in accord as to interpretation of well logs and surface surveys. This is probably due to lack of agreement upon causes of major movements within the whole region. Evidence of such movements may be attributed to overthrusting or block faulting of great masses of sediments and it will require many more completions within the zone to furnish sufficient evidence to support one or the other theory.

At the moment this discussion is not of major importance to the production department of the oil companies because they are following the usual practice of making offset locations when a well is completed. For this reason the large number of wells drilling in Section 30-2-7e and Section 25-2-6e, adjacent sections, have been started because the largest number of completed wells are also located in these sections.

Drilling operations on Schaurer lease of Edward H. Moore, et al, in Sec. 29-2-7e Fitts Pool, Okla.

Casing Points

After setting the string of 13⅜-inch surface casing, it is usual practice to drill an 11-inch diameter hole as deep as possible. The idea back of this practice is to start with a hole large enough to permit at least two reductions in size above the producing formation at about 4,200 feet depth. If the hole can be completed with the 11-inch bit the string of 7-inch casing is run inside this hole and cemented. If gas flowouts or other trouble requires reduction in diameter of hole it is accomplished in one of two ways.

The critical depth to which it is necessary to carry the 11-inch hole is approximately 1,900 to 2,000 feet. If good hole is drilled to this depth some contractors then change to 8¾-inch bit and drill to the 4,200-foot sand, setting the 7-inch string of casing inside of this combined 11-inch and 8¾-inch hole. If the hole is not in good condition a string of 9-inch casing is set at about 2,000 feet and the hole then reduced to 8¼-inch the balance of the way to receive a string of 7-inch casing set on top of the sand.

Gas Sands Encountered

To prepare a typical log of wells in the Fitts Pool at this time is impossible because the relative depths at which the various formations are penetrated vary, depending upon which side of the faults the well is located.

There are approximately the following formations passed through that contain gas and in one instance water:

	Feet
Gas sand	600
Water sand	900
Gas sand	1,200
Gas sand	1,400
Gas sand	1,800
Gas sand	2,400

These sands will vary from 3 to 50 feet or more in thickness and their formation pressures range about 650 to 700 pounds per square inch. The pressure and volume of gas encountered has caused blowouts in some holes and for this reason the mud problem is one of importance in this field. Blowout preventers are now used on all surface strings and some wells are rigged up with derricks mounted upon substructures that elevate the derrick floor about 7 feet above the top of the 8-foot concreted cellar used under such rigs. This permits the handling of casing without requiring men to go into deep cellars and encountering dangers from gas that might be escaping from the well.

Guards Against Blowouts

The mud used in drilling the upper portion of these holes has an average weight of about 10½ pounds per gallon, exerting a pressure of about 54.4 pounds per 100 feet of depth of hole. This equals about 350 pounds per square inch pressure at the bottom of a 600-foot hole and if the formation pressure is as high as reported in some instances it is probable that the mud will blow out. Therefore every precaution is taken to guard against blowouts while drilling in the upper 17-inch hole. As depth is gained the mud is more effective in controlling formation pressures because it has been observed that the gas pressure at depth does not increase materially over 650 pounds per square inch. This may be accounted for by partial release of formation pressure at the lower depths through faulting, or it is possible that

the lower formations never did have high pressures.

Caving Formations

In many of the holes so far drilled thick sections of badly caving shales have been penetrated. In one sample secured from a well it was found that 14 times as much material was from upper shale formations as the portion secured from the formation where the drill was penetrating when the sample was secured. The caving of shales in rotary drilled holes is not unusual and it was observed in the Oklahoma City wells and heavy muds used in many instances to control this caving by walling the walls of the hole.

In the Fitts Pool, however, the use of heavy mud alone does not seem to bring about the desired results. The shales are the same as those used for making cement at the plant located near Ada and therefore are mud making in themselves. They change the viscosity of the mud as they mix with it and there is also a limestone penetrated in these wells that greatly changes mud characteristics and in some instances so thickens it that the pumps have difficulty in handling the mud from the pits.

The reasons assigned to caving shales are numerous. Some operators believe that the laminated character of the bedding planes cause strains within the formation and as the hole is drilled through such formations the material adjacent to the hole is unsupported and tends to sluff into the hole and continues this movement until equilibrium within the strata is established.

Another theory is that the wetting properties of the mud fluid causes the shales to dissolve and mix into muds that flow into the hole.

And a third theory is that there are compression stresses within the shale stratum that are relieved when the drill makes the hole and these pent-up forces cause the shale particles to move to the point of low pressure, the open hole, where they continue to accumulate until the compression strains are relieved for some distance back of the drilled hole.

The shale cavings taken from Fitts Pool wells are in the form of long slivers indicating thin bedding planes with horizontal fractures producing pencil like pieces that vary in length from one-half to 3 inches. The type of mud pits being constructed in this field indicate that the drilling contractors anticipate encountering these shale slivers in quantity for at each location the first settling ditch is provided with three or four pipe jets that will permit these shale particles to be jetted out of the bottom of the settling pit by steam and delivered into adjacent mud pits. Some contractors are using mud screens to remove these shales.

In some instances loss of mud returns have been reported and was probably due to encountering gas sands of high permeability. One company plans to add a new shredded fibrous material to the mud, much upon the same principle that hair is added to plaster or straw to adobe mud. This method has not yet been thoroughly tried because the first shredded materials used dissolved to pulps but a new raw product has been selected and it is believed that it will help wall the hole with mud, also close off thief formations.

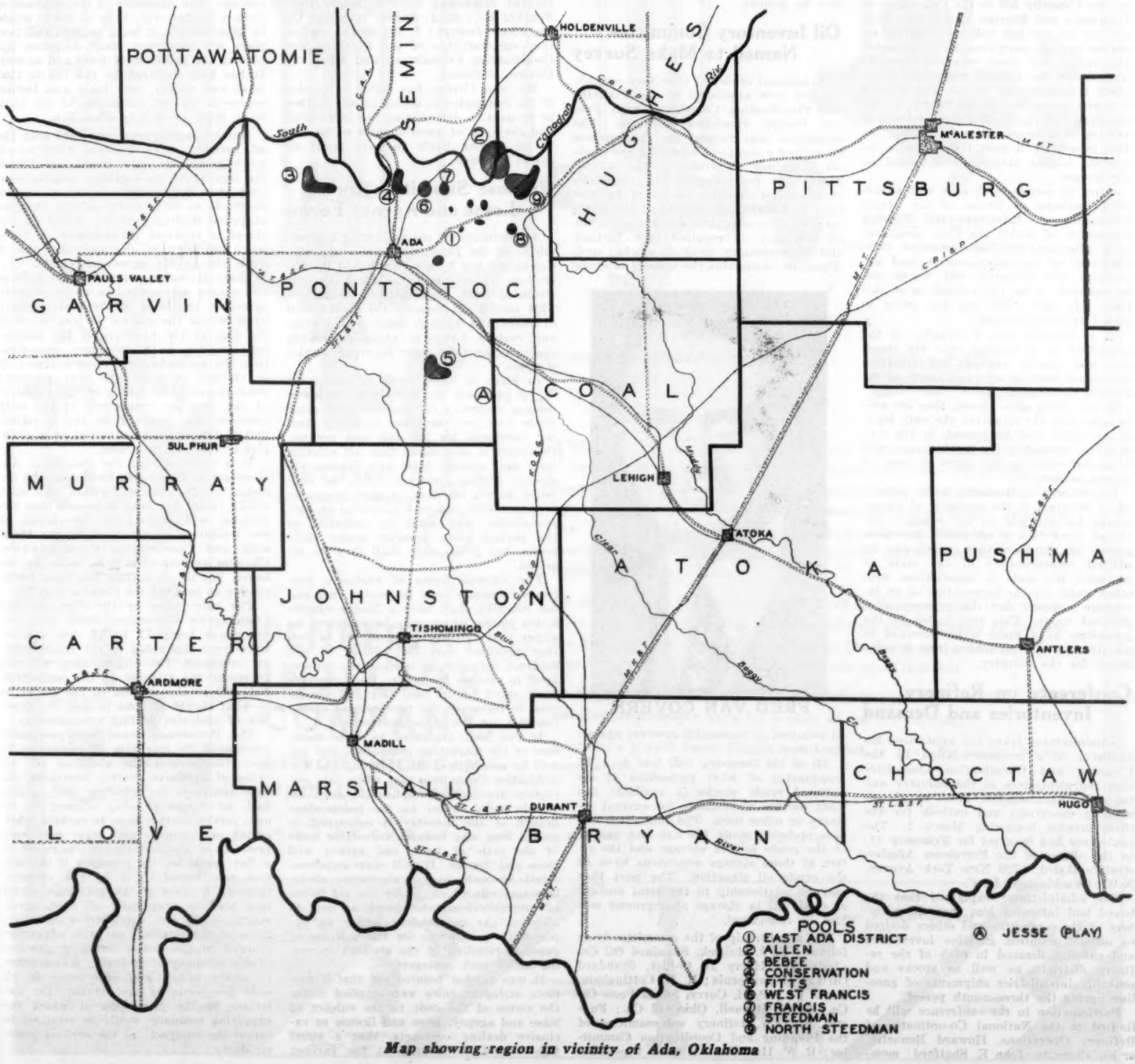
Cementing Practice

When the hole is completed to the required depth at which the string of 7-inch casing is to be set it is usual practice to attempt to cement back of this string the full depth of the drilled hole below the bottom of the surface string. This is about 3,500 feet of hole and as stated above it may be 11-inch diameter full depth, or may be 11-inch diameter down to 2,000 feet approximately and then reduced to 8¾-inch diameter, or there may be a string of 9-inch set in the 11-inch hole at 2,000 feet and the 7-inch string cemented in the 8¾-inch hole drilled below the bottom of the 9-inch.

Whatever the casing program followed there has been some instances where the cementing job has been difficult to complete and some operators are fearful that the final results have not been all that is desired.

In those wells that have not responded to normal cementing practice, and the cement has not returned to the proper height above the bottom of the casing, it has been assured that thief sands have taken it. The weight of the cement slurry used is usually about 14 pounds per gallon and this builds up a bottom-hole pressure of about 3,000 pounds. The pump pressure required to drive this cement from back of the pipe is reported to have been as high as 850 pounds per square inch, so the pressure exerted against sands encountered above the bot-

(Continued on Page 42)



Map showing region in vicinity of Ada, Oklahoma

Cole Committee Report Will Favor Action on Connally Amendment

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Feb. 5.—Chairman Cole, of the House subcommittee on oil legislation, today announced that the petroleum subcommittee would submit on Thursday a report on the Connally bill to the Committee on Interstate and Foreign Commerce. Indications are the bill will be favorably reported to that committee. Mr. Cole stated this report will cover only the Connally amendment for federal control of interstate transportation of oil and will be followed, some time in the future, by the supplemental report of his committee. If the bill is favorably reported prompt action in getting it past the House is expected. It has already been passed by the Senate.

After an earlier conference with Chairman Rayburn of Texas, of the House Committee on Interstate and Foreign Commerce of which the Cole committee is a subcommittee, Representative Cole, chairman of the subcommittee, had announced the Connally bill would not be reported to the full committee at this time. He said, "We are not going to rush this thing through."

It is believed that a majority of the committee is of opinion that the states can and should control the situation themselves without the assistance of the Federal Government.

If the states show clearly they are able to cope with the situation the only legislation which will be passed, in the way of direct legislation for the industry, will be an act enabling the states to form an interstate compact.

Representative Rayburn, while preparing a telegram to the governor of Texas, asking his attitude on the compact, received word that a resolution had been passed by the legislature, appointing an official representative of the state to represent the state in negotiations with other states for the formulation of an interstate compact for the prevention of physical waste. This was hailed by the committee as a great stride forward in the attempts to draft such a form of regulation for the industry.

Conference on Refinery Inventories and Demand

Administrator Ickes has announced his approval of a recommendation by the Planning and Coordination Committee that representatives of the industry and the Oil Administration meet to discuss refining operations and outlook for the three months beginning March 1. The conference has been set for February 11, in the offices of the Petroleum Administrative Board, 1729 New York Avenue, N.W., Washington, D. C.

The administrator explained that the board had informed him that the members of the committee and others desired to discuss required gasoline inventories and gasoline demand in each of the refinery districts, as well as stocks and probably interdistrict shipments of gasoline during the three-month period.

Participation in the conference will be limited to the National Co-ordinator of Refinery Operations, Howard Bennette, or his alternate, John E. Shatford; members of the refinery subcommittee of the Planning and Coordination Committee, and one representative of each refinery district or subdistrict. Technical representatives of the Petroleum Board will also be present.

Oil Inventory Committee Named to Make Survey

A national crude oil inventory committee has been appointed by the Planning and Coordination Committee, with Fred van Covern appointed chairman. The committee was formed for the purpose of making a complete survey of the crude oil inventory situation in the United States and to report on the quantities of crude oil actually contained in pipe lines and gathering systems of the country; to determine the amount of crude oil necessary as required tank bottoms and as customary working stocks; and, if possible, determine the amount of crude oil required as reasonable reserves against the future.

FRED VAN COVERN

All of the foregoing will lead to a determination of what proportion of the national crude stocks is available and what portion unavailable for current refinery or other uses. The committee will also probably study the age and quality of the crude oils in storage and the effect of those storage conditions have on the crude oil situation. The part they play in relationship to the total amount of crude oil in storage aboveground will also be considered.

The membership of the committee is as follows: E. J. Bullock, Standard Oil Co. (Indiana); Harry D. Collier, Standard Oil Co. of California; R. D. Cottingham, Texas Co.; P. H. Curry, South Penn Oil Co.; O. D. Donnell, Ohio Oil Co.; Fayette B. Dow, refinery subcommittee of the Planning and Coordination Committee; R. V. Hanrahan, Humble Pipe Line Co.; R. S. Knappen, Gypsy Oil Co.; R. D. Matthews, Union Oil Co. of California; Nelson K. Moody, Sinclair Prairie Oil Marketing Co.; J. Edgar Pew, Sun Oil Co.; E. J. Sadler, Standard Oil Co. (New Jersey); J. W. Steele, production subcommittee of the Planning and Coordination Committee; and Fred van Covern, chairman.

Mr. van Covern has called a meeting of the committee to decide on the method to be used in determining the inventories and the type of questionnaire to be sent to all parties likely to have crude oil stocks on hand.

Propose Substitute for Lease and Agency Forms

A resolution of the marketing subcommittee of the Planning and Coordination Committee has been forwarded to the Petroleum Administrative Board by the Planning and Coordination Committee. This resolution proposes the abolishment of lease and agency, lease and license, and certain forms of exclusive dealing contracts as they refer to retail service stations.

In place of these forms of agreement it is proposed to substitute exclusive dealing contracts for gasoline and other motor fuel, and separate exclusive dealing contracts for lub oils and greases. Provision is also made that all existing lease and agency, lease and license, exclusive dealing contracts, etc., be cancelled within 90 days, if such contracts are cancellable. If such contracts are not cancellable, they must be cancelled at the earliest date possible under their terms, but in no case shall they be renewed.

The allowed forms of exclusive contracts, separate ones for motor fuel and for lub oils, shall have a 30-day cancellation clause which may be exercised by either party to the contract. It is further provided that the holding of one contract may not be used as an inducement to procure the other. Each contract must stand on its own feet and not be used to influence the procurement of the contract for the other business.

It has been explained by some members of the marketing committee, and upheld by members of the Planning and Coordination Committee that while this resolution does not accomplish the most desirable ends, so far as the independent branch of the industry is concerned, it goes a long way towards correcting some of the evils of lease and agency and lease and license. It will open numerous retail accounts to manufacturers of lubricating oils which, under the old forms of contracts would be closed, as well as allowing the independent jobber an opportunity to compete for the business of gasoline retailing in the stations operating under such contracts.

It was further pointed out that if any more stringent rules were applied under the terms of the code to the subject of lease and agency, lease and license or exclusive dealing contracts, that a court fight would be brought at the earliest possible date by the companies involved to enjoin the Petroleum Administration from enforcing the provisions of this resolution. The prospects of the outcome of such a controversy, it is claimed, would be questionable, it being pointed out that there are numerous court decisions upholding the principle of lease and agency. It has been declared by the courts that lease and agency, and lease and license contracts are not violations of the antitrust laws, or of any other law.

Numerous attorneys connected with the oil industry have declared they would much rather go into court and attack the legality of an exclusive dealing contract than they would a lease and agency contract, as it is their opinion that an exclusive dealing contract would be declared a contract in restraint of trade much quicker than the mere fact that a lease and agency agreement exists.

These attorneys point out that a lease and agency agreement has, as its primary principle, the lease of the real property upon which the station is located, with the sale of the products of the supplying company as a secondary consideration. In an exclusive dealing contract, it is claimed, without the real property consideration, the selling of the products of the supplier exclusively is the only consideration involved in the question, and as this could be attacked as a violation of the antitrust laws.

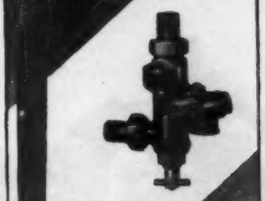
It is expected that the Petroleum Administrative Board will hand down its decision of the subject within the next week. Doubt has been expressed that the decision will embody the provisions of the resolution as voted on by the Planning and Coordination Committee. Changes are expected to be made by the board, but no intimation has been forthcoming as to what the changes may be.

The vote taken by the Planning and Coordination Committee ended in a tie, the count being 11 to 11, but the results were forwarded to the board without comment. The action taken will not represent the attitude of the committee, but will be the opinion of the board as to what should be done to stop the practice of exclusive dealing arrangements.

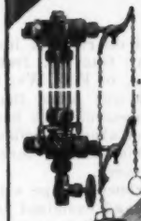
The Petroleum Board had previously announced its intention of proposing to the administrator the abolition of all types of exclusive dealing contracts, except contracts for gasoline and motor fuel, no company being allowed to tie up a service station so as to exclude lubricating oils, greases and other petroleum products of another concern; payment of a flat rental on the premises if the station was leased to it by the operator thereof, in place of the gallonage rental now used in practically all such agreements; a 30 day cancellation clause in favor of the retailer; no price advantage allowed to the dealer handling gasoline of one company exclusively; maintenance of resale price; and observance of all code provisions by the retailer, for violations of the provisions of which the supplying company would be required to cancel the contract at the earliest possible date.

PENBERTHY LIQUID LEVEL GAGES

MEET ALL OIL INDUSTRY NEEDS

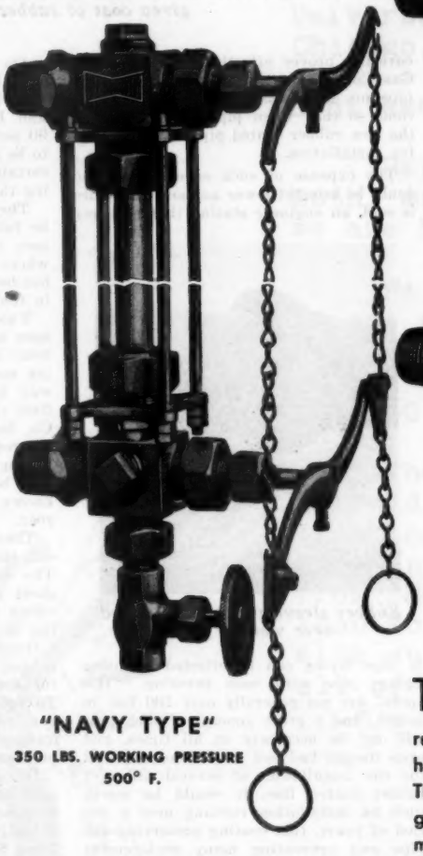

Automatic Injector

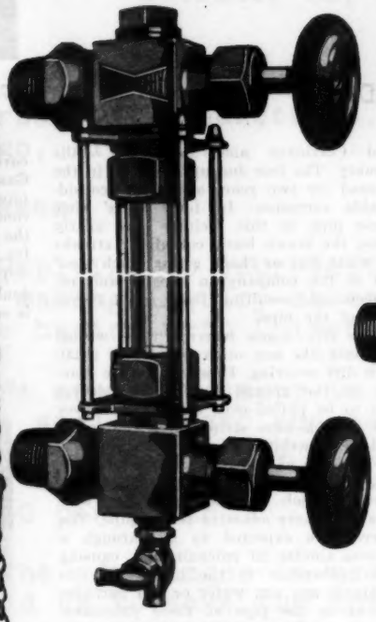
Ejector, Syphon or Jet Pump

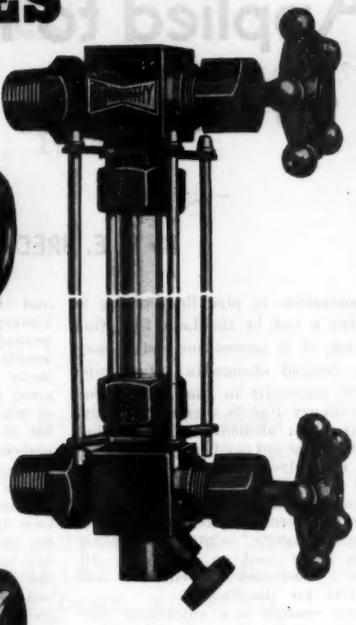

"Navy Type" Liquid Level Gage

"Safeguard" Automatic Liquid Level Gage

"All-Iron" Automatic Liquid Level Gage


"NAVY TYPE"
350 LBS. WORKING PRESSURE
500° F.


"SAFEGUARD"
300 LBS. WORKING PRESSURE
500° F.


"ALL IRON"
500 LBS. WORKING PRESSURE
750° F.

PENBERTHY PRODUCTS

THE three gages shown here are very popular in the oil industry because of their consistently dependable operation. All of them are ruggedly built of the highest grade materials by an organization that has had 48 years experience in the manufacture of quality products. The "Navy Type" is made from Navy Bronze Composition M, the "Safeguard" from high grade steam metal bronze and the "All Iron" from a modern electric iron alloy.

All these gages have automatic shut-off. Both upper and lower body have ball check valves that seat immediately and positively to prevent the loss of liquid when glass is broken. The hand operated stop valves may then be closed with safety and a new glass inserted.

Each gage is carefully tested and rigidly inspected at the factory. For detailed descriptions write for a copy of the new catalog.

Penberthy Liquid Level Gages are carried in stock by supply houses everywhere.

Gas Engine Lubricator

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Dipless Air Cock

Vulcanized Rubber Is Applied to Pipe Line to Combat Corrosion

By L. E. BREDBERG

Crew rolling rubber sleeve over joint after bare ends of pipe had been given coat of rubber cement

An innovation in pipe line coating is undergoing a test by the Lone Star Gas Co., which, if it proves successful, may cause a decided change in future pipe line work, especially in "hot spot" areas where ordinary line is corroded rapidly. The four main elements causing rapid deterioration of oil and gas pipe lines are (1) electrolysis, (2) soil stress, (3) acid soil and (4) alkaline soil. Companies have been experimenting for several years in order to overcome pipe corrosion by these four elements, paints and asphalt coverings being used on practically all lines as a corrosion preventative and preservative for the lines.

The new coating is a vulcanized rubber and is considered as possibly effective against soil stress, and also against electrolysis, the rubber being nonconductive to the electrical currents which pass along and through pipes setting up corrosion.

Five 20-foot joints of Republic stitch weld, 10-inch, 31.445-pounds-per-foot pipe is being used in this test. The pipe was shipped from the plant to the Goodrich Rubber Co.'s factory in Akron, Ohio. There the pipe was covered with a one-quarter inch coating of rubber, vulcanized on the pipe by a special process designed by the rubber company. This process covers the pipe and sets the rubber so compactly that no pin holes, or air holes or other breaks are considered possible in the coating.

Space Left for Welding

In this special experiment the rubber was vulcanized on the pipe to about 10 inches from each end. This is done so as to allow plenty of room for welding the joints of pipe together in the line, which is on the company's gathering and distribution system from the Ranger district in West Central Texas traversing the state eastward to towns and cities to the southeast. The location of the hot spot is near Maypearl between Cleburne and Corsicana and Mexia, in Ellis County. The line dug up has been in the ground for two years and shows considerable corrosion. In four years' time some pipe in this vicinity was nearly gone, the brown loam, containing streaks of white clay or chalk, giving much trouble to the company in repairs and replacements, resulting from rapid corrosion of the pipe.

The five joints inserted were welded and laid like any other pipe, with a 20-inch dirt covering. However, before placing in the ground live rubber sleeves had to be pulled over the pipe to cover the 20-inch bare strip where the joints had been welded. These rubber sleeves, about twice as thick as the rubber coating, are cemented in place, and on this particular job were wrapped with wire so as to insure adhesion to the pipe. The sleeves are expected to go through a process similar to vulcanization, causing tight adherence to the pipe so as to eliminate any air, water or soil particles getting to the pipe at these junctures. The sleeves lap over the rubber coat vulcanized on the pipe fully 10 inches, giving further insurance to the protection of the pipe. As the sleeve sets on the pipe, the tension on the rubber decreases. The wire wrapped around the sleeve is expected to corrode off in time, leaving the clean sleeve cemented over the weld and formerly bare strip. If the sleeve proves defective, which is not expected, the joints will corrode out, thereby preventing a positive experiment, so much consideration was given these sleeves and joint coverings.

Work Done at Factory

Four thousand feet of such pipe can be placed in the ground per day, but extra crews could lay such pipe about as fast as regularly coated pipe, field vulcanizing plants being used to speed up the work. However, such vulcanized pipe will probably be covered at the factories and shipped to locations as needed. If such covering proves effective the Lone Star Gas Co. is expecting to keep a stock of pipe on hand near the "hot spot" locations so that when pipe needs replacing the new rubber coated pipe will be handy for installation.

The expense of such covering will no doubt be brought lower as more and more is sold, an engineer stating that economy in pipe laying can be effected by using lighter pipe with such covering. "Hot spots" are not generally over 100 feet in length, and a great amount of such pipe will not be necessary at all times, and even though bad soil conditions may call for the installation of several miles of rubber coated line, it would be worth such an installation running over a period of years, this coating preserving the pipe and preventing many replacement and reconditioning jobs.

Rubber sleeve ready to be rolled over welded joint

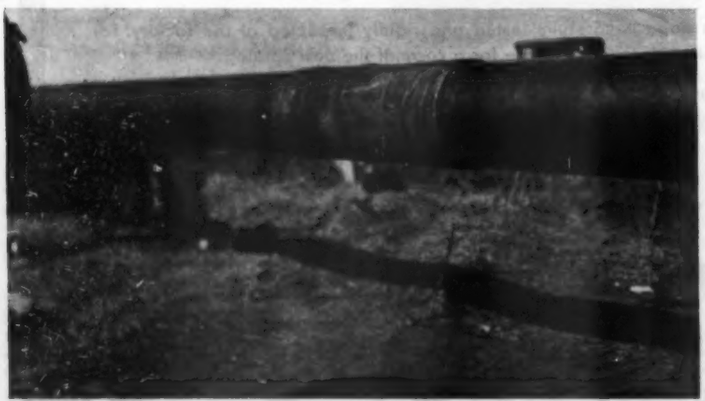
On the large parallel distribution line laid by the Lone Star Gas Co. from Petrolia in North Texas, to Fort Worth and Dallas in 1929, it was found that 90 per cent of the replacement work had to be done in a stretch of about 11 miles, certain places within this distance causing the majority of the work.

The 100 feet of experimental pipe will be taken up next year and examined to note if corrosion has taken place anywhere along the five joints. If corrosion has been forestalled it will be placed back in the ground for continued experiments.

Vulcanized rubber covered nipples have been used in pipe lines on different systems in the East, such coverings proving successful, but the experiment under way by the Lone Star Gas Co. is the first of its kind. The Magnolia Refining Co. has installed several joints of such covered pipe on its gasoline line between Luling and San Antonio, but it, too, has just been installed and nothing will be known of the experiment for at least a year.

The rubber covering is hard, but resilient, therefore will not be affected by rot. The rubber for coating comes in thin sheet rolls, a separator being used between the sheets to prevent them adhering to each other. The pipe is placed on a frame after it has been rolled with the rubber, and the frame is then run into a furnace. This sets the rubber on the pipe. To vulcanize it in the field in this manner, requires the pipe to remain in the furnace for about two hours, under a temperature of around 200° F.

Dr. H. E. Fritz, chemical sales manager of the mechanical division of the Goodrich Rubber Co., and Elmer F. E. Schmidt, general superintendent of the Lone Star Gas Co., supervised the laying of the 100 feet of line.



Rubber sleeve in place over joint. It is wired on, the wire corroding off after it is in the ground some time. The sleeve laps over the other rubber coating fully 10 inches and is twice as thick as the coating to insure an air tight and water tight joint

Government of Mexico Issues Decree Canceling Mexican Eagle Concessions

NEW YORK, Feb. 5.—The Mexican government on February 4 issued an official decree canceling all concessions applying to lands granted to the Mexican Eagle Petroleum Co. in 1906 on the ground that the grant was unconstitutional and not to the best interests of the country. This action follows a year in which there has been considerable friction between the Shell subsidiary and government including labor disputes in which other oil companies have been involved. It was thought that an agreement entered into a couple weeks ago would end the labor troubles.

It was not clear from the official decree whether the action would be retroactive. If so, it would probably mean that the government would endeavor to collect many millions of dollars for oil produced in properties located in six Mexican states. The Shell interests are the largest producers, refiners and marketers in Mexico. The Mexican Eagle officials, following the government announcement, issued the following statement:

"The concession is as much a law of the land as any other statute placed on the books. The concessions cover two principal phases: First, the right to explore and exploit national lands for oil purposes and calling for certain minimum expenditures, which have been made; second, certain franchises by way of import and export taxes.

"The company has exercised to a very small degree the right to take up national lands. In fact, all its oil production comes today from private lands, that is to say, from private owners who have been paid substantial sums for leases or royalties. Cancellation will not affect production.

"For many years the company has enjoyed certain franchises regarding the im-

(Continued on Page 31)

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December 28, 1934

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Gentlemen:

Replying to your letter of December 26th, making inquiry as to the experience we are having with Universal Inhibitor.

We are very happy to advise you that we are well pleased and satisfied with the results obtained. We have been able to reduce our treating expense approximately $700.00 per month.

The advantages in using your inhibitor allowed us to save the initial expense of treating towers, thereby allowing us to sweeten our cracked gasoline as it comes from the stabilizer and then inhibit and load to the tank cars. We formerly treated with sulphuric acid, sweetened and rerun, all of which has been done away with.

Yours very truly,

BELL OIL & GAS COMPANY

Rex Young

How much can the chemical cop save you?

It will cost you nothing to find out

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

Producers of Pennsylvania, Ohio, and West Virginia Discuss Output

By R. C. CONINE

PITTSBURGH, Pa., Feb. 2.—The extension of the ratable contract between producers and pipe lines, which now covers the water-flood areas, to the remainder of the Pennsylvania oil regions was forecast here when 26 oil operators from Pennsylvania, Ohio and West Virginia met to discuss the immediate problem of increasing the going price of Pennsylvania grade crude oil. Allied to this proposal was another to establish a purchase and storage agency to carry over off season production and thereby absorb the seasonal discrepancies between supply and demand.

Opposed to the plans was a third to adopt a supplemental regional oil code under federal authorities to restrict actual production within the allowable fixed for wells, pools and states by the national oil administrator.

The purpose of the meeting, as outlined to Charles Fahey, chairman of the Petroleum Administrative Board, was to discuss the possibility of arriving at an agreement by the producers of all the Pennsylvania grade areas whereby production can be kept within the limitations of the state allowable set by the federal Government, and equitably distributed by areas, fields and pools, and whereby the supply can be kept to market demand and the price structure established so that it will be possible for the 130,000 wells south of the water drive areas of Bradford and Allegany to stay in business.

Ratable Contract

A. E. Faine, of the Ohio-Pennsylvania Grade Producers Association, was named chairman of the meeting, and Joseph E. Moorhead, executive secretary of the Pennsylvania Grade Crude Oil Association, was made secretary. A committee of seven was appointed, charged with the duty of studying, first, a ratable form of contract featuring an unrestricted market for the output of naturally producing wells; second, a form of purchasing and storage agency, the purpose of which would be to hold off-season production and supply seasonal demand, and, third, a supplemental code calling for federal supervision of production in the various fields of the region, and distinguishing among the different types of operations.

This committee is to meet February 8, at the William Penn Hotel in Pittsburgh, at 10 o'clock in the morning to formulate their suggestions for consideration by a larger group which is to be representative of all producing districts in the region. Members of this committee are: A. E. Faine, chairman ex-officio; C. E. Streeter, Bradford; Neil Sullivan, Allegany; W. J. Brundred, Central District; A. V. Clinger, Warren or Middle District; Carl Dougherty, western Pennsylvania; Albert B. Craig, West Virginia, and C. F. Huff, southeastern Ohio.

Among the features of the pro rata contracts to be studied by the committee is a "waiver clause" in which producers employing secondary recovery methods will waive a portion of the crude stipulated in their contracts in favor of new production from "natural pumping" wells. Air and/or gas repressuring operators in the so-called broken sand areas asked that the clause be amended to exempt their own operations. One of the producers using air-gas repressuring said that production from 1,000 wells on his property was about 200 bbls. a day, or about half a barrel per well. He urged that rate of production be given first consideration in any plans made to prorate output in the various fields.

Intensive drilling campaigns in the water-flood areas in the Bradford and Allegany Fields, operators in other districts said, has forced the nonwater-flooding fields to suspend drilling operations almost entirely. It was pointed out that the completions in 1934 for the entire Pennsylvania grade region numbered 2,519, and of these 1,414 were in the Bradford-Allegany Fields. The fact that most of the old producing acreage in the region lies outside of these two fields was referred to. Figures of the Pennsylvania Geological Survey indicate development in the various counties of the State as follows: Allegheny County has one oil well for every 41.6 acres of proven oil land; Armstrong County, one well per 59.1 acres; Beaver County, 237.8 acres for each oil well; Butler County, 25.9 acres for each oil well; Elk County, 6.7 acres for each oil well; Forest County, 14.8 acres for each oil well; Greene County, 20.1 acres for each oil well; Lawrence County, 19.2 acres for each oil well; Venango County, 3.3 acres for each oil well; Warren County, 7.7 acres for each oil well; Washington County, 31.3 acres for each oil well. The acreage is proven oil land.

While the larger flood operators in the Bradford Field were not represented at the meeting, one operator of that field who does not use secondary recovery methods warned those present there is much to be defended in the viewpoints of water drive producers. These producers, he said, have invested millions of dollars in the Bradford and Allegany Fields, and their developments have assured large purchasers of a dependable supply of Pennsylvania grade crude oil. The fact that large companies, including several of the so-called Standard group, have become purchasers of this crude oil or lubricating oil stocks made by Pennsylvania grade refiners, it was said, has eased a competitive situation which was becoming increasingly difficult with the spread of solvent extraction methods. If steps are taken which will make these companies uncertain of their supply of grade crude oil, they will abandon use of the region products and push their own material in the premium motor oil field.

The principal point of difference among water-flood producers and their supporters, and the "natural well" and air and/or gas drive operators, may be set forth thus: Operators outside of Bradford and Allegany, generally contend that if Pennsylvania grade crude is made scarcer the price will rise. To lower the volume of this crude available they urge that water drive wells be prorated. Incidentally, they point out, if Bradford production is cut back 5,000 bbls. a day, operators in the other fields will be able to resume drilling to make up a part of this reduced allowable. The anticipated increase in crude price and the resultant stabilization in the markets under some form of strict control, will enable operators in southeastern Ohio, West Virginia, southwestern Pennsylvania, the Warren and Kane to Butler districts, to borrow money to finance their work to lower production costs. Several of those present at the meeting urged merely that Bradford and Allegany stop the drill long enough for their own districts to catch up.

Question of Price

On the other side were those producers who described the heavy investments which must be liquidated in the water-flood areas. These investments, they say, actually saved the Pennsylvania grade crude oil industry from becoming hardly more than a local enterprise of little importance nationally and with little interest to jobbers who must now watch price margins closely. If the Bradford and Allegany Fields, they say, were to be held down, operators in the other districts would not be able to meet the demand and many present buyers would refuse to consider an oil so uncertain in supply. The problem, apparently, is to gamble for the answer to the question: "Would refiners pay $3 or $4 for Pennsylvania grade crude oil or would they switch over to Mid-Continent crude?"

One of the lower field operators suggested that the solution to the region's price and production cost problem lies in holding output to consumptive demand. Refiners would not be permitted to build up stocks of products and then withdraw as crude oil purchasers, or to cut the price. Inventories held by marketers would be closely watched. To this suggestion another operator objected on the ground that while federal allocations to refiners are based on gasoline production, the movements of lubricating oils and gasoline to the trade do not coincide, there being a considerable lag in the former. The refiner, he pointed out, has learned considerable by experience, and the producer may err seriously if he undertakes to change plant operations without understanding as much, at least, of the problems involved as the refiner.

The committee of seven is to study a form of storage and purchasing agency to hold off seasonal production and supply seasonal demand. The producer would pay the interest, gathering, storage and other charges when the crude is sold. A similar plan involving the storage of bright stock has been urged for some time for the region. However, objectors to this plan were not lacking. Many of those present said that the best place to store crude oil is in the ground. Others pointed out that it would not be difficult to have millions of dollars tied up in this stored crude oil and products, and such a supply might easily exert a depressing effect upon current markets. Such a plan would have to be tied in closely with a scheme of proration.

May Extend Development

In connection with the proposal to prorate water drive and other wells stimulated by some form of secondary recovery methods, it was pointed out that there were probably 4,400 water-flood oil wells and a larger number of air and/or gas drive wells which would require supervision, as well as the 130,000 wells said to be "natural producers," but many of which may go modern at any time. In the Bradford and Allegany Fields there are thousands of these "natural producers" on properties held in the family for many years and which progressive operators in these fields have watered out most of their acreage and must acquire more property for development. Some of these are surveying possibilities in the lower fields and may operate extensively south of Bradford in the future.

As the recommendations brought out at this meeting were to be designed for approval by the Petroleum Administrative Board, Quinn Shaughnessy, attorney for

(Continued on Page 31)

P. W. A. Loan Suggested to Ickes for Gas Line From Panhandle to Detroit

WASHINGTON, D. C., Feb. 4.—Secretary Ickes, public works administrator, said Monday a plan is under consideration to pipe natural gas from the Texas Panhandle to Detroit and St. Louis.

Testifying before the Senate Appropriations Committee on how a proposed $4,000,000,000 public works appropriation might be spent, he said:

"Here is a particular project that came to my attention only within the week. The governor of Texas sent a representative up here. There has been a good deal said about the waste of natural gas in the Panhandle of Texas and they are becoming sensitive about that.

"Their proposal was to pipe that gas to Detroit and St. Louis and the proposal was to create a state authority which would make it possible to borrow money from public works.

"There is a proposition which would cost $50,000,000, something that has not heretofore been taken into account. It would require a great amount of direct labor and it would have the additional advantage of requiring an enormous amount of steel pipe which would stimulate a basic industry, and give secondary employment to the men who make and transport the pipe. That would not take long to engineer and yet it has not been engineered."

Mr. Ickes was consulted by R. B. Anderson, Texas tax commissioner, who was acting as representative of Governor Allred on the subject. The administrator explained that only preliminary discussion had taken place, but that Texas plans propose establishment of state authority, created by state legislature, with duties somewhat similar to T.V.A. distribution of Muscle Shoals power. So the State could acquire necessary rights of way, the administrator explained the federal Government might assist by the exercise of the powers of eminent domain.

Mr. Ickes said that while the estimated cost of building separate lines to St. Louis and Detroit would approximate $50,000,000, a single line from the field to both cities would cost only $30,000,000. Formal application to the Government has not yet been made, nor has there been a decision as to which plan will be officially advanced for P.W.A. consideration.

Mr. Ickes viewed the plan as a way to utilize the billion feet of gas now being blown into air daily in the Panhandle and as a basis for forcing the price of gas to consumers to lower levels.

Texas, in Mr. Ickes' opinion, is conscientious in a desire to eliminate waste of natural resource, and if it were possible in this manner the State would push the plan. Opinion here is that the plan as proposed might encounter some legal difficulties, due to interstate character, but that a feasible program might easily be worked out.

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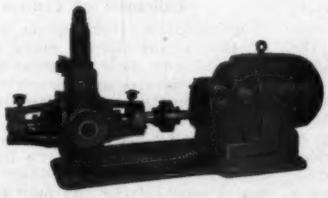

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Skelly Gasoline Plant at Lyman Employs Efficient Fractionation Methods

By GEORGE WEBER

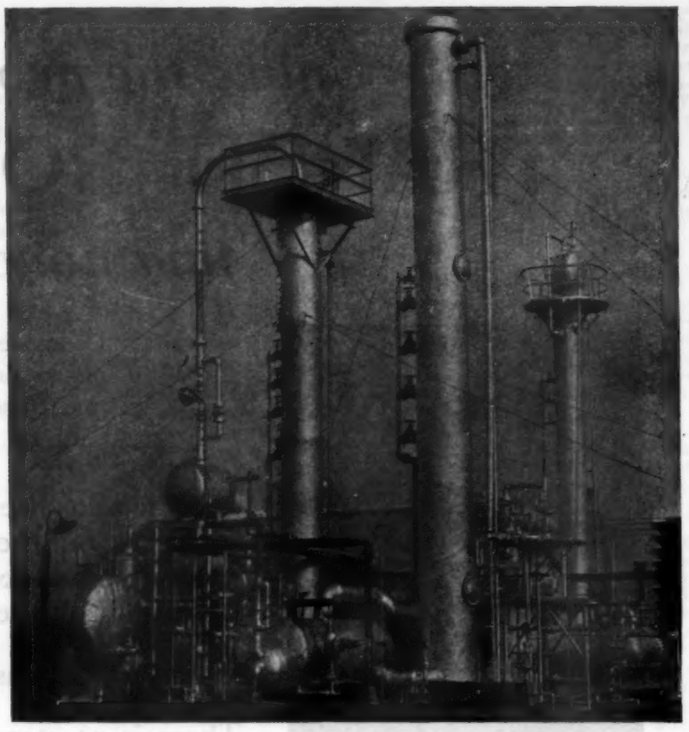
Modernized equipment and special operating methods feature the natural gasoline plant of the Skelly Oil Co. at Lyman, Okla. This unit is unique for the Osage area because of the complete absence of absorption in processing the gas. The last of this type of equipment was recently removed from the site. Processing now consists wholly of compression and gas rectification within towers of unusually high efficiency. This departure from the usual natural gasoline manufacturing methods is attributed to the nature of the gas and to the improved fractionation methods employed. The gas is gathered from wells in the Burbank Field and contains a high percentage of recoverable fractions which are unusually free of sulphur compounds.

Roughly, the plant may be divided into three separate units. In the first the gas is received from the wells and the raw liquid is recovered by compression. This is done in two steps. The gas entering the first stage of the compressor is exhausted at 50 pounds pressure and then passes through a condenser where the liquid separating out is drained and pumped to storage. The gas from this unit is recompressed to 280 pounds and is partially cooled in a louvre tower. From there it is passed through a butane expander. This consists of a horizontal exchanger in which the residue is expanded to 30 pounds, further cooling the rich gas. The lighter liquid ends are condensed in this chamber and are taken off in a separator or trap.

After returning counter current through the butane expander at reduced pressure, the residue gas leaves the plant. All of the required gasoline fractions have been stripped from it. The liquid, called raw stock, is stored in pressure tanks. It averages 116° A.P.I. gravity.

Separation of Raw Stock

The second step in the plant performs a separation of the raw stock into three distinct cuts. Three distillation towers are utilized together with the necessary condensers, reboilers, charging and reflux pumps and control instruments. Reciprocating pumps are used to handle all liquids within this system. Operating conditions in the first tower are adjusted to limit the overhead cut to ethane and propane. This cut is partially condensed and pumped to accumulator tanks. The remainder of the raw stock is sent through a second tower where butane is withdrawn overhead. The purpose of the third tower is to separate the ethane and water of solution from the propane taken overhead in the first tower. Water in solution with the propane, unlike free water, will vaporize along with the lightest fractions. In this tower the pressure is maintained at 330 pounds and the feed enters at 131° F. The propane charge has an initial boiling point of —65 to —70° F. and an endpoint of about 44° F. The finished product has an initial of —48° F. and an endpoint of 41° F.



Raw stock fractionation unit at the Lyman, Okla. gasoline plant of the Skelly Oil Co.

As no free water entered this unit, all products are now completely dehydrated. The vapor pressure of the propane cut is 209 pounds at 105° F. The butane cut has a vapor pressure of 58 pounds at 105° F. Operation of the unit is continuous, and can be maintained at the rate of 50,000 gallons per day, based upon the volume of the charge.

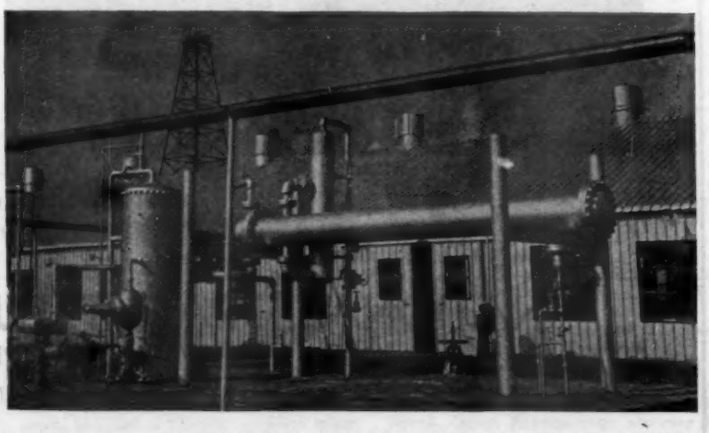
From this point the further processing of the liquids calls for unusually sharp fractionation. The three cuts taken in the preceding process are further divided by batch operation in two 3'x55' fractionators containing 23 bubble trays each. Use of steam in stabilizing is, of course, restricted to a closed system. Here the charging pumps are of centrifugal type. The general outline of operation observed in this instance is to divide a cut in two parts and to continue the subdivision until the product has the desired stability. During the fractionation, the products are tested continuously to determine when the cuts should be made. In testing some of the fractions, results are so consistent that the "human element" is the varying factor in reporting results. Temperature differences between initial and endpoints have been decreased to about 9 or 10 degrees, and in some cases to 2 degrees. Practically no residue content is tolerated. Absence of absorption oil in the plant processes results in residue tests as low as .00007 per cent with the average around .0004 per cent.

Exactness of Control

Maintenance of production in a plant of this nature incurs many problems. Seasonal and daily temperature differences require constant attention of the operator on the fractionating towers. Difficulty is also encountered in pumping the different fractions, and a packing which will hold for all the liquids has not been found. The handling and storage of such volatile and pure liquids requires the greatest care to prevent costly losses through evaporation and contamination. A flexible hose is used to pipe them from the tower to the storage tanks. This method prevents the mixing which would occur in a common header system. The plant includes more than the usual amount of storage, some tanks being tested to 400 pounds. Control in both fractionating units is necessarily most exacting and responsive. All instruments have been concentrated on two boards, one in each pump house. This greatly aids the operator in keeping a careful check on the various conditions of temperature, pressure and charging rates in

(Continued on Page 42)

Centralized control board for fractionation unit



Equipment in a compression stage showing condenser and butane expander

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Texas

On the surface the movement for an interstate compact on oil regulation is making more rapid progress than had been expected. Favorable action has been taken by the legislatures of New Mexico, Oklahoma and California and the Texas legislature, in response to a request from Governor Allred, has authorized the continuation of the negotiations begun at the Ponca City conferences called by Governor Marland of Oklahoma.

It is also hoped that Governor Landon and the Kansas legislature will act before the interstate conference resumes at the meeting in Dallas, February 16, called by Governor Marland on the invitation of Governor Allred.

There is a possibility, though perhaps not a probability, that the conference at Dallas can agree upon a program that can be submitted to the legislatures of the participating states promptly It may be that more time may be required to reach an understanding but there is an urgency in the situation that should not be ignored.

Legislation at Washington has been delayed until it is seen what the states will do. Chairman Cole of the House subcommittee has indicated a preference that the states should do their own work. His committee will report only the Connally amendment for Federal control of interstate traffic until it is seen if state regulation of production can be stabilized.

One theory is that if state regulation can be made effective "hot" oil can be eliminated from interstate traffic without Federal legislation. On the other hand, the Petroleum Administrative Board and other advocates of Federal control insist that state regulation is bound to fail and that Federal control of more than interstate traffic is essential.

So, while Washington waits to see whether the states will go through with a compact for state enforcement or by their failure throw the question back to Congress, attention centers on the prospects for the meeting at Dallas next week.

Governor Allred's emphasis on limitation to physical waste recalls the conditions which compelled the Texas legislature to extend regulation to market demand. The market demand law, by the way, expires in September, unless continued.

If limitation to physical waste permitted widely disproportionate production in one state against production regulated to market demand in other states there could be no hope of agreement. The fact that a Texas legislature enacted a market demand law is evidence of its necessity and justice. There is no hardship in limiting production to market demand unless it be a hardship to be prevented from wasting your substance.

Texas certainly has had no reason to complain of discrimination or of being denied its proportionate share of production, even without taking into account the millions of barrels of excess production which it has thrown on the market. There is no disposition on the part of any oil-producing state to give Texas anything but the best of it, if Texas will play fair.

Possibly, if there were more realistic decisions like that of the Third Circuit Court of Appeals at Austin last week more progress might be made. It throws a flood of light on injunction processes.

Owners of oil, which they claimed to have on hand before December 10 when the state tender law went into effect, obtained a temporary injunction in a district court restraining the Railroad Commission from prohibiting movement of that oil.

Attorney General McGraw successfully argued before the Circuit Court that a temporary injunction permitting the shipment of that untendered oil amounted to a final disposition of the case, dissipating the subject matter of the litigation without notice or hearing to the state. The hearing set for February 13 would find the oil gone.

Citation upon the district judge to show cause why a writ of prohibition should not issue against him to prevent the issuance of writs under which oil is moved without tenders may clear up the situation.

The newest order of the Railroad Commission, requiring every person in the state possessing oil or its products to file an inventory within 15 days and to obtain a permit before selling it, is a further illustration of the extent to which the commission will go in issuing orders. What is most urgently needed, however, is a demonstration of enforcement. Explanations about the obstacles raised by legal proceedings, court decisions and lack of sufficient men to cover the field, minimize the effect of the most drastic orders on paper.

Which brings us back to this compact conference. Of what avail will a compact be if any state fails to make good?

While Congress deliberates and the interstate agreement has yet to be reached and approved by the legislatures, developments in East Texas may force the issue. There is a revival of activity at Washington upon the part of advocates of absolute Federal control notwithstanding congressional distaste for the Ickes administration. Recent nationally circulated sensational articles on the oil situation were welcomed as aiding their campaign.

We may expect soon to hear about the assumed necessity for some form of Federal legislation on oil to take the place of the code when the N.R.A. act expires in June. Texas is the one state which is cited as an excuse for Federal legislation and it is the outstanding state asserting state rights, both at Austin and in Washington.

The Railroad Commission has now apparently gone the limit in orders. If it needs further authority or larger forces to enforce those orders the legislature is in session.

Two bills have already been introduced in the House at Austin, one to prohibit the issuance of temporary injunctions by a district court until notice has been given the state and a hearing held. The bill would also require the plaintiff to post a bond and it provides for immediate appeal of District Court decisions to the Courts of Civil Appeals where the cases would receive precedence. The second bill would vest the State Supreme Court with original jurisdiction to set aside restraining orders.

Texas leaders at Washington, Vice President Garner, Senator Connally, and Chairman Rayburn of the House Committee on Interstate Commerce which will pass on oil legislation, if any, can have no delusions about the position of Texas in this matter.

Texas has the power by showing it is master in its own house to end the threat of Federal control of its principal industry. All that is required is a determined purpose and a definite line of action plainly laid down and persistently pursued to a clear conclusion.

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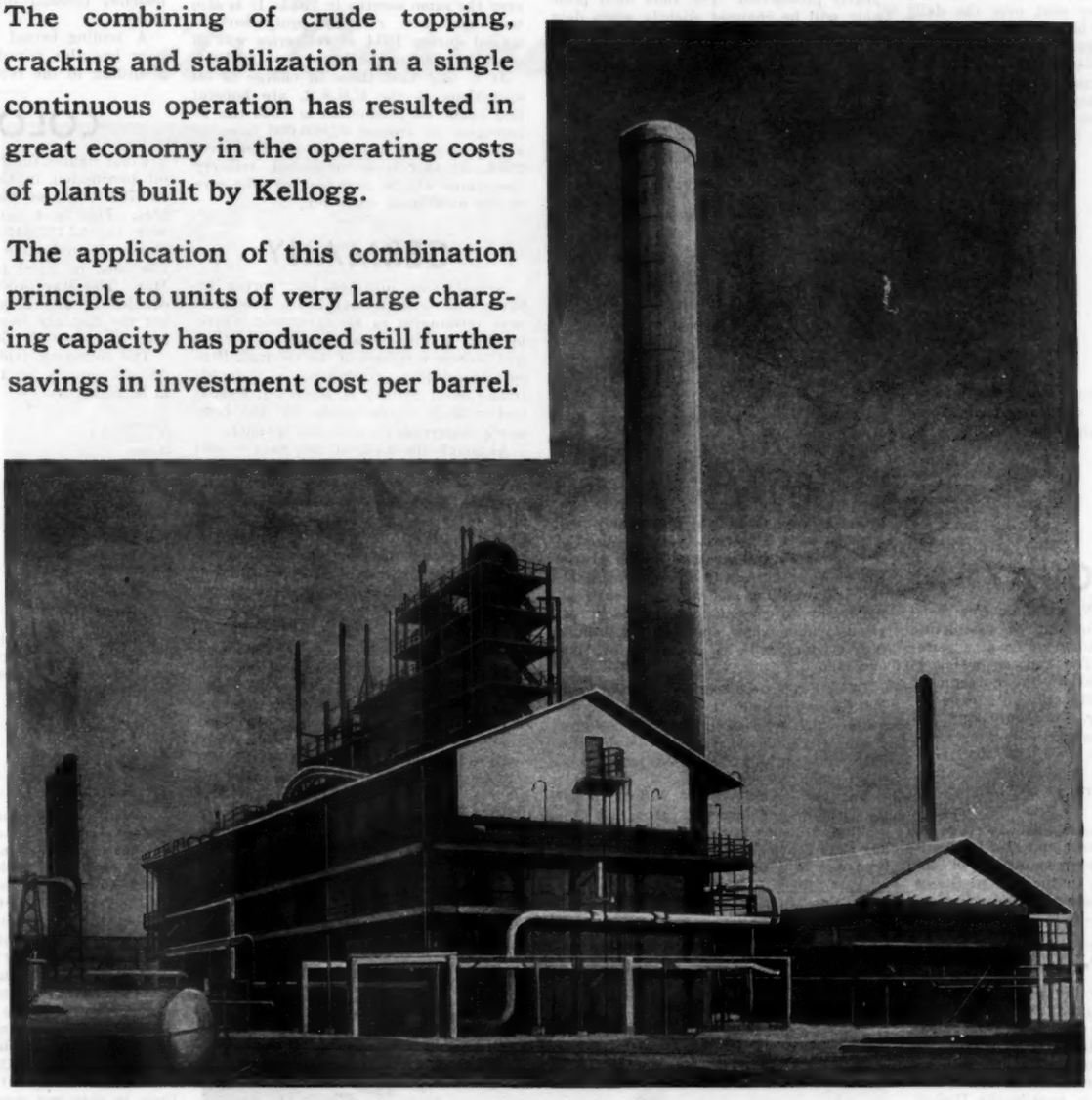

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NEWS FROM FOREIGN LANDS

PERU

Crude oil production in Peru during 1934 totaled 14,143,959 bbls. The daily daily average of 38,723 bbls. represented a gain of 26.2 per cent over the daily average of 30,700 bbls. for 1933.

There was a gain in production in every month of 1934 over the same month in 1933. The largest production of 1934 was in October when it totaled 1,303,554 bbls. The following table gives the production by months for 1934 and 1933:

	1934	1933
January	1,188,540	796,907
February	1,041,658	647,573
March	1,086,827	773,274
April	1,037,127	818,359
May	1,085,192	912,864
June	1,187,030	907,863
July	1,233,804	1,055,727
August	1,300,253	1,110,959
September	1,259,901	1,035,338
October	1,303,554	970,427
November	1,169,826	998,066
December	1,250,247	1,178,004
Total year	14,143,959	11,205,361
Daily average	38,723	30,700

Crude oil production of Peru in previous years based on Bureau of Mines reports was as follows (data in barrels):

1932	9,900,000
1931	10,089,000
1930	12,449,000
1929	13,422,000
1928	12,006,000
1927	10,127,000

URUGUAY

Administracion Nacional de Combustibles Alcohol Y Portland is completing contracts for the construction of a refinery in Uruguay. The concern which is owned and operated by the government plans to build a refinery with a capacity of 3,600 bbls. daily. The equipment will include pipe still with a cracking unit. It will be located in the Plata River Harbor. The refineries in the Buenos Aires, Argentine, area are located along the same harbor.

The government company has crude oil production in Uruguay and also has marketing facilities. Representatives of the company have been in the United States investigating processes and equipment.

U. S. S. R.

It is stated that the Soviet engineers who are in the United States from the various operating trusts and technical institutes will not be recalled because of the breaking down of the Russian-American debt negotiations. Approximately 30 of these engineers are now in the United States inspecting equipment and studying operating methods. These engineers were expected to make recommendations in regard to purchase of equipment and processes in this country during the next few months. It is probable some of this business will be placed on a cash basis as official representatives have indicated limited purchases from several American industries will be made.

Despite the action of the State Department at Washington, and the announcement that the Export-Import Bank, created to facilitate trading regulations, would be closed, there are some observers who believe negotiations will be reopened in the near future. It is assumed some new basis of agreement will be worked which will apply to other debt negotiations as well as those of the U.S.S.R.

Crude oil production in the U.S.S.R. for 1934 established an all-time yearly record, according to preliminary figures which show that the crude for the year totaled 24,147,000 tons, or 169,029,000 bbls. (463,000 bbls. daily). This represents a gain of 12.6 per cent over the 1933 production and is also greater than the production of 161,900,000 bbls. in 1931, which was the largest previous yearly production. The 1934 total probably will be changed slightly when data on the year's operations are issued by the government.

The oil administration of the U.S.S.R. also showed a large gain in drilling activities in 1934 with an increase of 50 per cent over 1933. The following table shows the comparison with 1933 based on information available at this time (data in tons):

	1934	1933	Gain
Crude oil production	24,147,000	21,440,000	12.6%
Drilling (meters).	1,356,798	838,091	50.0
Crude runs to stills	18,856,200	18,511,700	1.8
	Dec., 1934	Dec., 1933	Gain
Crude oil production	2,091,000	1,798,800	16.2%
Drilling (meters).	95,973	64,522	49.0
Crude runs to stills	1,601,800	1,421,700	12.6
	Nov., 1934	Nov., 1933	Gain
Crude oil production	2,055,500	1,923,000	6.8%
Drilling (meters).	89,323	83,733	5.5
Crude runs to stills	1,655,700	1,488,800	11.9

The 50 per cent increase in drilling activities is the result of a definite program of expansion which probably will be even more apparent in 1935. Most of the increased drilling was in the proven fields, but there was also considerable extension drilling and wildcat operations. According to present plans, wildcat explorations in what is considered promising territory will be a feature of 1935 operations.

In addition to the new wells the drilling figures include the deepening of old wells which were producing at shallower depths. In some old pools, production has been substantially increased by drilling to new and deeper horizons.

For the entire year it will be noted that despite the increased crude oil production, runs to stills showed a gain of less than 2 per cent. This is said to have been due to a policy of increasing crude oil in storage. It will be noted in the table that this relative situation changed the latter part of 1934 when November and December crude runs to stills showed gain of approximately 12 per cent over the same months in 1933. It is also true that new refinery equipment installed during 1934 at refineries was in operation during the latter part of 1934.

It is said that those in charge of oil operations in the U.S.S.R. are hopeful that crude oil production in 1935 can be increased to around 32,000,000 tons, or a gain of approximately 33 per cent over 1934. If this is accomplished, refinery operations will be expanded to take care of the additional crude oil.

GERMANY

Negotiations initiated last spring between Saar and German benzol producers have terminated in an agreement whereby two leading Saar benzol producers will become members of the German Benzol Association, according to a report from Consul Sydney B. Redecker, Frankfort-on-Main, made public by the commerce department's chemical division.

Although the bulk of the Saar benzol output has been consumed in Germany, Saar producers have lacked a retail distribution organization which they will now enjoy as members of the German Benzol Association, which is a well organized cartel distributing organization representing practically all benzol producers in the Ruhr district, the report states.

Benzol production in the Saar district totaled 30,000 metric tons in 1933 and the 1934 output is estimated at between 38,000 and 40,000 metric tons, of which around 30,000 metric tons were exported to Germany and the remainder consumed largely in the Saar district itself. Only small quantities were delivered to France and most of these transactions were on a barter exchange basis, it was stated.

By means of the improved "still exhaust" or "inner suction" process to be installed in Saar benzol plants, it is anticipated that the output can be appreciably increased. This improved system is said to increase benzol output by approximately 30 per cent, and the yield is raised from 10 to 12 per cent, though these gains are achieved at the cost of lessened thermal units of the gas produced.

A leading benzol producer in Luxemburg has also joined the German cartel, according to the report.

COLOMBIA

Final figures for 1934 show that crude oil production in Colombia totaled 17,340,724 bbls., or an average of 47,508 bbls. This is a gain of 31.7 per cent over the 13,157,641-bbl. total for 1933. Crude oil production jumped from 1,193,736 bbls. in April to 1,730,095 bbls. in May. The May production has not been equaled in any month since that time, but the monthly totals in all cases have been in excess of 1,500,000 bbls.

The following table gives the production by months for 1934 and 1933 (data in barrels):

	1934	1933
January	1,012,780	1,005,436
February	903,471	1,035,417
March	1,017,147	1,218,790
April	1,193,736	1,093,533
May	1,730,095	1,169,238
June	1,683,691	1,113,328
July	1,646,739	1,189,655
August	1,691,314	1,164,104
September	1,627,632	1,085,885
October	1,636,293	1,087,397
November	1,633,654	999,253
December	1,554,172	995,605
Yearly total	17,340,724	13,157,641
Daily average	47,508	36,048

The following table gives the Colombian production for previous years based on Bureau of Mines reports (data in barrels):

1932	16,417,000
1931	18,237,000
1930	20,346,000
1929	20,385,000
1928	19,897,000
1927	15,014,000

Recent reports from the Barco concession in Colombia show that the No. 5 test has been abandoned as dry. This test is one of several which has been drilled or are now drilling on what is known as the La Petrolea structure in the southern part of the concession. The No. 5 test of the Colombian Petroleum Co. (Gulf) which started drilling last September was located about 6 kilometers south of the No. 1-A, the first completed test in that section. The No. 5 is located in a saddle between the north and south domes. It was drilled to depth of approximately 2,500 feet, testing the possible producing formations to that depth. The formations in this test were about 1,200 feet lower than in the No. 1-A.

The No. 7 test, which is considered especially important as indicating the possible production of the La Petrolea structure is now drilling. It is located on the crest of a fold about 4,500 meters south and west of the No. 1-A.

In the Rio de Oro area, which is located in the northern part of the concession, it is expected that the drilling of the No. 2 Oro, which will be the first test in that section by the Colombian company, present owners of the concession, will probably spud in next month. The 6.5-kilometer road extending from Puerto Barco on the Rio Catatumbo to the site of the Oro No. 2 has been practically completed. This road, through a jungle country, is said to represent an expenditure of several hundred thousand dollars and required several months to complete. The first test probably will be drilled to a shallow depth and completed with the expectation of securing fuel oil for drilling later tests.

Water terminal facilities of the Commonwealth Oil Refineries, Ltd., at Berry's Bay, N. S. W., Australia

Resolved—

it's Business we're after in 1935

16 of the 34 Ford V-8s which HOMCO uses exclusively for their dependability, economy and ease with which they take the roughest oil field roads.

HOMCO'S leading man-power, assembled recently in Houston. Bottom row, left to right: Joe Duncan, store mgr., Eunice, N. Mex.; Joe Teuton, store mgr., Houma, La.; Howard Salter, Louisiana salesman; Charlie Smith, dist. mgr., Freer and Sam Fordyce; Albert Peters, store mgr., Kilgore; Herman Moon, Gulf Coast salesman; Carroll Graham, store mgr., Lake Charles; G. W. Hunt, Houston city sales; and W. B. Stallings, store mgr., Houston. Top row, left to right: W. F. Hunt, Kilgore salesman; W. M. Garney, Houston office; J. E. Lassiter, Gulf Coast salesman; Ted Brouilette, Houston office; A. W. Waddill, Houston city sales; George O'Leary, v.p. and sales mgr.; Bob Ewen, auditing and credits; J. E. Peters, sec-treas.; Jack Clark, v.p.; Ed Robertson, Beaumont city sales; and L. L. Talley, Houston office.

More than 50 HOMCO men, equipped with more than 30 Ford V-8s, are at your service this year, with stores at convenient locations from Houma, La., on the east to Hobbs, N. Mex., on the west—from the Mexican border on the south to Kilgore on the north. A HOMCO representative is always near your location.

HOMCO SERVICE represents: (1) Complete line of supplies; (2) A select line of specialties, including EMSCO screen, HOMCO blowout preventers, STANDCO brake lining, JEFFREY rotary chain, HAZARD wire rope, BAROID, AQUAGEL and EL PASO rotary clay, BAKER wall scraper, REGAN crown and traveling blocks; and (3) the Gulf Coast's most complete fishing and cutting tool service.

HOMCO

HOUSTON OIL FIELD MATERIAL COMPANY

HOUSTON, TEXAS

Branches: Palestine, Kilgore, Freer and Sam Fordyce, Texas; Eunice, New Mexico; Lake Charles and Houma, Louisiana

Other Stocks: Cleveland, Louise, Livingston and Refugio, Texas

Gasoline Flounders Around at Low Price Levels in Group 3 Under Weight of New Troubles

By T. F. SMILEY

Beset by further depressing developments, gasoline continued to flounder around at low levels in the Group 3 (Oklahoma) territory this week. Announcement last Saturday that the Standard of Indiana had reduced its retail prices three-tenths cent throughout its territory wherever normal prices prevailed imparted an unpleasant jolt to the market in the Oklahoma and other areas. Coming as it did on the heels of what was considered a fairly successful effort to correct abnormalities in the East and Middle West and to efface price wars in those regions, it tended to create general uneasiness concerning the gasoline price structure.

Although it has been Indiana's policy to base its pump prices on Mid-Continent tank car prices and these tank car prices have been heading downward, doubt is expressed as to whether this policy provided the entire reason for the company's action.

May Revive Buying Movement

Suspension of the movement begun several weeks ago by large integrated companies to buy up distress stocks of gasoline added discouragement. This movement, although a voluntary and perhaps rather loosely organized one, was exercising a mildly beneficial influence when it suddenly stopped upon reports that court decisions handed down January 19 in injunction suits would throw immense accumulations of crude and refined products in East Texas upon the market. Although a stay order later held these court actions in abeyance, there was no resumption of the purchasing program. It was reported this week that plans were under way to revive it in a more definite and aggressive form.

Cold weather and snowstorms in the North have cut motor travel almost to the vanishing point in some areas. This, along with lower temperatures throughout the country generally, has had a particularly flattening effect on consumption of low-octane material.

Cheap Material Shows Up

East Texas right at this juncture is described as "closed tight," but recent hurried shipments of gasoline from that district and from North Texas and Oklahoma to Chicago, St. Louis, Cincinnati and perhaps other consuming points are reported to have been in sufficient volume to disturb both the tank car and retail markets. Some of this material appearing in Cincinnati is said to have been offered to the trade at 3⅛ cents, making it evident that it had been bought at the refinery at not more than 3 cents.

Persons interested in stabilizing gasoline prices at profitable levels have been shedding no tears over reports that some marketers in the Chicago area, believing the tank car market was near collapse under the stress of adverse influences, sold short, only to find themselves obliged to pay more than they received.

The erratic character of the current market is indicated by the fact that late last Saturday afternoon some low octane U. S. Motor material in East Texas was seeking a buyer at 3 cents without finding one. At the opening of the present week, however, none was said to be available in that area at less than 3¼ cents. There was visible softness in the tank car market in North Texas and Oklahoma, and where a plant needed money to meet a payroll or for other purposes it frequently had to make concessions to effect a quick sale.

Natural Gasoline Slipping

Natural gasoline, which began to rise last July and has established a remarkable record since that time by extending its peak period some three months beyond the time ordinarily marking its end, has at last begun to slip and quotations this week were about a quarter-cent below those of a week ago. There is no reason now to predict an upturn in the naturals till late next summer, when the annual buying for winter storage may be expected to start. Spot buying for the time being has dried up, largely in sympathy with the dwindling spot buying of refinery gasoline. Manufacturers of natural gasoline are making no complaint. They have had a good season.

Furnace oils provide one of the market oddities of the moment. Notwithstanding relatively inconsequential spot demand, quotations have maintained a satisfactory level, apparently in the expectation that cold weather at consuming points would provide a sharp stimulus at almost any time. Contract movement seems to have been quite adequate to take care of requirements, however, and in the meantime rather unwieldy accumulations of this material are said to have been put into storage.

Bargains in Burning Oils

Necessity of getting rid of these stocks now appears to be becoming urgent. Their owners realize production has exceeded the season's demand, and they are faced with the alternatives of offering concessions or carrying their stocks through the summer of 1935. This situation is said to have produced strange bargains here and there. In some instances the bargain is said to have taken the form of giving 38-40 prime white distillate in filling orders for 38-40 straw. Observers say they see little prospect of burning oils being kept at their present quoted price levels.

Kerosene was in brisk demand, with

(Continued on Page 31)

Refined Oil Market Barometer

Although an unsatisfactory gasoline market prevailed in most areas, better conditions seemed to be in sight, with East Texas continuing to be regarded as the determining factor. Burning oils seem unlikely to gain higher price levels in view of rather large stocks reported to be in refinery tanks and softness in natural gasoline may be expected to increase. Kerosene and the lubricants, with spring demand approaching, are expected soon to be bright spots among the oil products.

Mid-Continent.—Gasoline weak. Natural slipping. Kerosene strong. Burning oils disappointing. Lubricants firming. Wax off.

East Coast.—Gasoline looking better. Kerosene strong. Distillates tighter. Wax weaker.

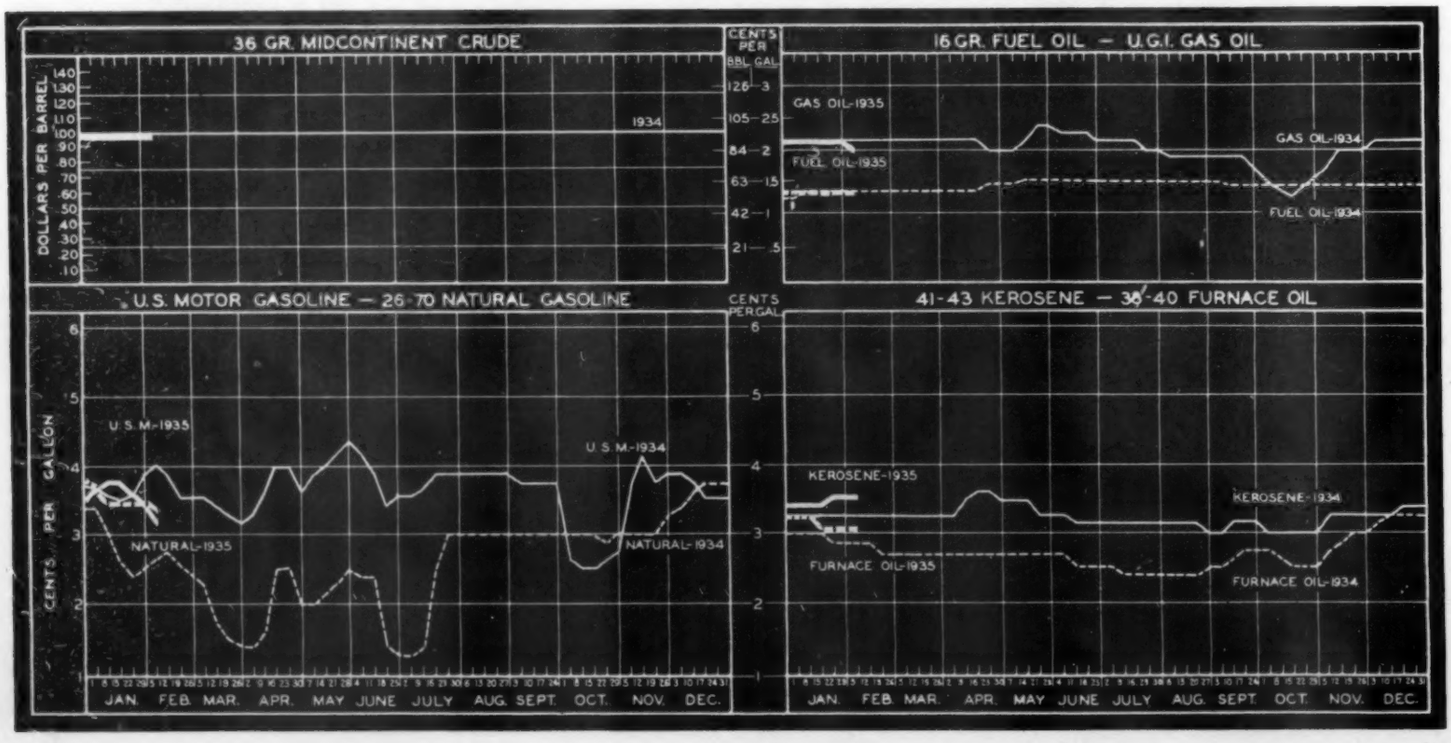
Gulf Coast.—Gasoline recovering from a weak spell. Kerosene scarce. Fuels and gas oils steady. Lubricants weak, with shading of prices.

Pennsylvania.—Bright stocks showing strength and price increase expected. Wax lower.

California.—Gasoline soft and spotty. No price changes.

Chicago.—Gasoline easier, with tank wagon and service station adjustments. Heating oils spotty.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Spot Prices Firm on the Atlantic Coastal Market; No Fear Felt of Excess Gasoline Supply

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, Feb. 4.--Increased supplies of gasoline and certain grades of fuels at the Gulf Coast formed the principal development of the past week having significance in this market. Any concern regarding this situation applies to the future, as spot prices on deliveries over the first half of February were firm today.

The action of the Standard Oil Co. of New Jersey last week in advancing the gasoline service station prices in New Jersey one-half cent, except at Camden, was considered another step in the direction of normal prices, a trend which has been under way in this territory over the past month.

This market has been flooded with more than the usual number of rumors over the past week and this fact, more than developments of a definite nature, may account for the feeling of uncertainty after a period of 30 days had brought substantial improvement in gasoline prices. Reports for a day or two indicated that a fleet of tankers loaded with gasoline, kerosene and all grades of fuels were on their way to eastern terminals from the Gulf Coast as a result of the release of materials by court orders in Texas. It was feared that this dumping would again break the tank car market in this territory and spread to the retail end. These reports proved to be highly exaggerated.

Investigations so far have failed to reveal any cause for immediate alarm. It was determined that some of the released gasoline and other products will be brought around to this market as it was already in the hands or purchased by concerns that have operating facilities at the Gulf and points along the Atlantic Seaboard. The trade was assured that this material would not be dumped on the market. It was indicated that at least two companies concerned were in need of certain products to take care of their regular customers who were willing to pay posted prices.

Wish to Build Up Stocks

In the case of gasoline it was claimed that independent marketing companies were more than willing to store any surplus in excess of immediate requirements. It is said that certain of these independent operators for several weeks have been endeavoring to find excess supplies of gasoline which they could store at the Gulf or at water terminals along the Atlantic Seaboard. If these statements are correct the available storage facilities could easily absorb all the gasoline that has been released so far in Texas. One observer in this connection, says that the relative scarcity of gasoline at coastal points this winter while the lid was on in East Texas has convinced these brokerage and marketing organizations that the large excess supplies of 1934, 1933 and 1932 are a thing of the past and for that reason they are willing to consider storage programs at this time. They are said to feel that before the spring demand gets under way that either through new federal or state legislation, or both, "hot" oil operations in Texas will again be reduced to a minimum which will mean a tight gasoline market and higher prices.

Other Side of Picture

The foregoing summarizes one view of the market. The other is less optimistic but hopeful. Everyone, whether seller or buyer, appears to have their attention centered on East Texas and Texas operators generally as being the crux of the oil situation for the immediate future at least. Even cable inquiries from foreign countries want to know about "hot oil" situation in East Texas and these foreign buyers are quick to sense any change either on the weak or the strong side due to changes in East Texas operations. Although not generally realized in the industry cheap East Texas crude oil and refinery products were sold over a wide foreign area during 1932, 1933 and 1934 so that they were an important factor in world markets as well as in this country.

Despite the optimistic statements made in regard to the market being able to absorb the increasing quantities of East Texas refinery products due to the gain in "hot oil" operations, veterans of the trade would like to see immediate action in reducing these operations. Even if storage facilities are available at this time they dislike to see tanks filled with cheap gasoline to be offered to the domestic and export trade in the spring or early summer months. Gasoline storage at refineries and bulk terminals which was low in November and December has increased rapidly since the first of the year. This gain and any increases at independent terminals if they continue, will bring about a top heavy situation which means sales at low prices later in the year.

Gulf Markets Weak

Gasoline prices have weakened over the past 10 days at the Gulf. Middle octane U. S. Motor has been available for coastwise shipment as low as 4½ cents although the quotations of most sellers is 5 cents. This 4½-cent price in effect means a 1½-cent spread between the Gulf and the New York Harbor prices. This is a wider spread that is considered necessary to cover tanker movement and loading and unloading charges plus profit. Trouble, however, usually does not start until this spread between the Gulf and Atlantic Seaboard markets is 2 or more cents per gallon. It was reported during the week that East Texas gasoline released by the court decision was available at 4 cents or less at the Gulf but it was impossible to verify this price or anything less than 4½ cents for middle octane material. One concern which was said to be offering the low priced gasoline said that it has no gasoline to offer under 5 cents for coastwise movement.

The Gulf export market was also weaker. No sales are reported but changes in quotations when reported have been downward. The low quotations on 375 endpoint gasoline was 4¾ cents.

Low tank car prices again prevail at Buffalo, Rochester and several points in western New York. The posted dealer price at Buffalo was 9.5 cents and service station 12 cents, including 3-cent state and 1-cent federal taxes. The posted dealer price at Rochester was 10 cents and service station 12.5 cents including taxes. These net dealer prices are less than the tank car prices should be at these points.

Kerosene and Distillate

All sellers in this territory are in agreement that the tank car kerosene market is exceptionally strong with 6¼ cents the prevailing market in New York Harbor. The larger companies in some cases in order to supplement their own refinery output have been buyers from Pennsylvania, Middle West and even Mid-Continent refiners. These kerosene purchases are delivered to bulk stations closest to the sources of supply. Buyers report that these markets adjacent to this territory have tightened considerably over the past two weeks. In the Middle West and Mid-Continent the peak kerosene demand of the year generally comes in late February and March and refiners there are not anxious to part with supplies at this time.

The continued cold weather is entirely satisfactory to the tank car and tank wagon sellers of furnace oils. Earlier in the season when mild weather prevailed there were constant complaints that a few distributors and an occasional tank car seller were underselling in order to get business. The cold weather has minimized this competition and the entire market is tighter than any time in several months. The prevailing market on No. 1 furnace is 6 to 6¼ cents with 4¾ cents for the other three grades. The heavier industrial oils also are firm. U.G.I. gas oil is quoted at 4¾ cents in tank car lots and the same price prevails for Diesel oils. To the marine trade Bunker C is steady at $1.15 and Diesel fuel at $1.89.

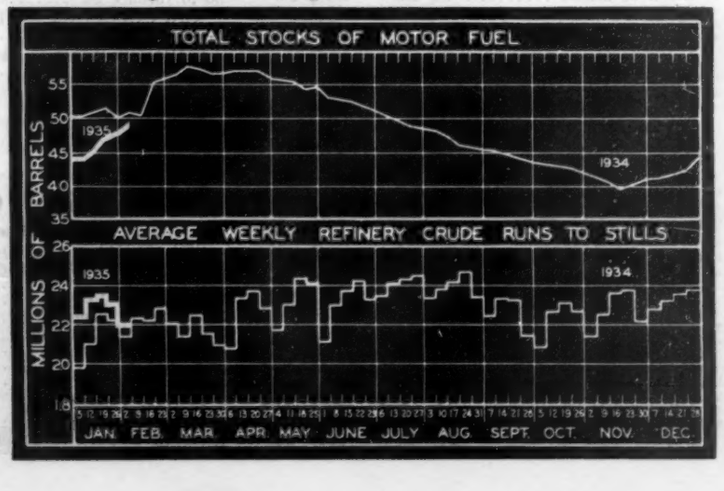
Three sellers noted improvement in the demand for bright stocks. Others could see no change. Normally the bright stock demand increases in the late winter and spring months to supply stocks for the summer motor oils. As is generally known, one of the reasons for the unsatisfactory bright stock market over the past several months has been the trend toward lighter oils for cars during the winter months. This in effect has meant that smaller quantities of bright stocks were used in blending the finished motor oils.

Higher viscosity oils are used during the warmer seasons and this no doubt will enlarge the market for the high viscosity stocks. However, the trend in summer oils is toward the lighter motor oils. This is especially true of some of the new cars for which a No. 30 S.A.E. is the maximum recommendation of the manufacturers during the summer months. Refiners are meeting this situation in two ways. In some cases they are reducing their output of bright stocks and increasing the production of overhead neutrals for which there is a strong demand, due to this same situation. They are also devising means of reducing the viscosity of their bright stocks so that larger quantities can be used in blending. Any improvement in the bright stock market will aid most of the steam refined stocks.

American Petroleum Institute Weekly Refinery Statistics

Week Ending February 2, 1935

	Capacity reporting per cent	Daily crude runs (bbls.)	Finished motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	420,000	13,879,000	11,240,000
Appalachian	93.3	78,000	2,010,000	1,110,000
Indiana, Illinois, Kentucky	94.6	277,000	8,391,000	4,506,000
Oklahoma, Kansas, Missouri	83.7	244,000	5,239,000	3,906,000
Inland Texas	47.6	84,000	1,406,000	1,857,000
Texas Gulf	97.7	472,000	5,853,000	9,093,000
Louisiana Gulf	96.4	117,000	1,339,000	3,919,000
North Louisiana and Arkansas	83.7	38,000	239,000	463,000
Rocky Mountain	66.7	36,000	755,000	706,000
California	96.9	435,000	10,455,000	65,700,000
Total United States	89.8	2,201,000	49,566,000	102,500,000



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasolines

	Feb. 5		Jan. 29	
OKLAHOMA (Group 3)—				
U. S. Motor grades:				
Below 63 octane	.03¼	.03½	.04⅜	.04⅝
63-70 octane	.04¼	.04½	.04⅝	.04⅞
60-62 400 grades:				
Below 63 octane	.03⅜	.03⅝	.03½	.03⅝
63-70 octane	.04¼	.04½	.04⅜	.04⅝
64-66 375	.03⅝	.03⅞	.04	.04¼
68-70 360	.03¾	.04	.04¼	.04⅜
NORTH TEXAS—				
U. S. Motor grades:				
Below 63 octane	.03¼	.03½	.03½	.03⅝
63-70 octane	.04¼	.04½	.04⅝	.04½
60-62 400	.03¼	.03½	.03½	.03⅝
64-66 375	.03⅝	.03⅞	.03⅞	.04
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.04¼	.04⅜	.04¼	.04⅜
63-70 octane	.05⅝		.05⅝	
60-62 400	.04¼	.04½	.04¼	.04½
ARKANSAS (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.04¼	.04⅜	.04¼	.04⅜
63-70 octane	.05⅝		.05⅝	
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 63 octane	.03¼	.03½	.03½	.03⅝
63-70 octane	.04¼	.04½	.04⅝	.04¾
60-62 400	.03¼	.03½	.03½	.03⅝
64-66 375	.03¾	.04	.03⅞	.04⅛
68-70 360	.04	.04¼	.04⅛	.04⅜
Aviation fighting grade	.04¾	.05	.04⅞	.05
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.04⅜	.04½	.04⅝	.04½
60-64.9 octane	.05⅝		.05⅝	
65-70 octane	.06		.06	
68-70 350	.05½		.05½	
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08	.07	.08
58-60 400	.08	.09	.08	.09
EAST COAST—				
U. S. Motor, below 60 octane:				
*New York	.05¾		.05¾	
Baltimore	.05¾		.05¾	
U. S. Motor, 60-64 octane:				
*New York (Bayonne)	†.06		†.06	
Philadelphia	.06		.06	
Boston	.06	.06¼	.06	.06¼
Baltimore	.06		.06	
Charleston, S. C.	.06		.06	
U. S. Motor, 65 and above:				
*New York	‡.06¼		‡.06¼	
Philadelphia	.06¼		.06¼	
Boston	.06¼	.06½	.06¼	.06½
Baltimore	.06¼		.06¼	
Charleston, S. C.	.06¼		.06¼	

*All grades of gasoline one-fourth cent less for small barge shipments.
†For New Jersey delivery, 6¼ cents.
‡For New Jersey delivery, 6½ cents.

GULF COAST (domestic)—				
U. S. Motor:				
Below 60 octane	.04¾	.05	.04¾	.05
60-64.9 octane	.05	.05¼	.05	.05¼
65 octane and higher	.05¼		.05¼	

Naphthas

	Feb. 5		Jan. 29	
PENNSYLVANIA (inland refineries)—				
50-52 (blending)	.04	.04¼	.04	.04¼
52-54 450 (blending)	.04	.04¼	.04	.04¼
54-56 450 (blending)	.04	.04¼	.04	.04¼
50-52 450 (blending)	.04	.04¼	.04	.04¼
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.03½	.04	.03¾	.04
Cleaners' naphtha, 56-58 gr., 200 i.b.p., 320 e.p.	.06¾	.07	.06¾	.07
Lacquer diluent, 180 i.b.p., 250 e.p.	.07¾	.08	.07¾	.08
Lacquer diluent, 140 i.b.p., 200 e.p.	.08¾	.09	.08¾	.09
Rubber solvent, 68-70 gr., 100 i.b.p., 300 e.p.	.06¾	.07	.06¾	.07
Stoddard solvent, 300 i.b.p., 410 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
Pet. thinner, 290-300 i.b.p., 415 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p., 330 e.p.	.06¾	.07	.06¾	.07
Petroleum spirits	.05¾	.06	.05¾	.06

Natural Gasolines

	Feb. 5		Jan. 29	
OKLAHOMA (Group 3)—				
Grade 26-70	.03⅜	.03½	.03½	
Grade 18-55	.04	.04⅛	.04⅛	.04¼
Low vapor pressure grades:				
14 lb. v.p. (max.)	.04½	.04⅝	.04⅝	.04⅞
12 lb. v.p. (max.)	.04⅝	.04¾	.04¾	.04⅞
NORTH TEXAS—				
Grade 26-70	.03	.03¼	.03¼	
Grade 18-55	.03⅝	.03¾	.03⅞	.04⅛
Low vapor pressure grades:				
14 lb. v.p. (max.)	.04	.04⅛	.04¼	.04½
12 lb. v.p. (max.)	.04⅜		.04⅝	.04⅞
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
Grade 26-70	.03⅝	.03¾	.03¾	.03⅞
CALIFORNIA—				
75-85 375	.06½	.06¾	.06½	.06¾

Kerosenes

(All kerosenes water white)

	Feb. 5		Jan. 29	
OKLAHOMA (Group 3)—				
41-43	.03½	.03⅝	.03½	.03⅝
42-44	.03⅝	.03¾	.03⅝	.03¾
NORTH TEXAS—				
40-41	.03¼	.03⅜	.03¼	.03⅜
41-43	.03½	.03⅝	.03½	.03⅝
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
41-43	.03¾		.03¾	
ARKANSAS (Ark., N. La. & Miss. del.)—				
41-43	.03¾		.03¾	
PENNSYLVANIA (inland refineries)—				
45	.04⅝	.04¾	.04⅝	.04¾
46	.04¾	.04⅞	.04¾	.04⅞
47	.04⅞	.05	.04⅞	.05
CHICAGO (based on Oklahoma Group 3)—				
41-43	.03½	.03⅝	.03½	.03⅝
42-44	.03⅝	.03¾	.03⅝	.03¾
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.04¾	.05¼	.04¾	.05¼
NEW YORK (Bayonne, N. J.)—				
41-43	.06¼		.06¼	
GULF COAST (domestic)—				
41-43	.04¾	.05	.04¾	.05

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area)
(Refineries will absorb freight to 80 cents a ton)

	Feb. 5	Jan. 29
Pile run	6.00	6.00
Direct from still	7.00	6.00
Egg, nut, pea	8.50	7.00
Lump	8.50	8.50

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

	Feb. 5		Jan. 29	
OKLAHOMA (Group 3)—				
32-36 straw	.03	.03⅛	.03	.03⅛
36-38 straw	.03⅛	.03¼	.03⅛	.03¼
38-40 straw	.03⅛	.03¼	.03⅛	.03¼
38-40 prime white	.03¼	.03⅜	.03¼	.03⅜
NORTH TEXAS—				
38-40 straw	.03¼	.03⅜	.03¼	.03⅜
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
36-40 furnace oil	.03	.03⅛	.03	.03⅛
ARKANSAS (Ark., N. La. & Miss. del.)—				
32-36 furnace oil	.03	.03⅛	.03	.03⅛
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.03⅛	.03⅜	.03¼	.03⅜
38-40 straw	.03¼	.03⅜	.03¼	.03⅜
38-40 prime white	.03¾	.03½	.03⅜	.03½
NEW YORK (Bayonne, N. J.)—				
No. 1	.06	.06¼	.06	.06¼
No. 2	.04¾		.04¾	
No. 4	.04¾		.04¾	

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gal., Diesel and fuel oils per bbl.)

	Feb. 5		Jan. 29	
OKLAHOMA (Group 3)—				
32-36 gas oil, cracking stock	.02	.02⅛	.02⅛	.02¼
U.G.I. gas oil	.02	.02⅛	.02⅛	.02¼
32-36, zero to 15 gas oil	.02¾	.02⅞	.02¾	.02⅞
28-30, No. 3 burner oil	1.10	1.15	1.10	1.15
26-30, zero to 10 fuel oil	.95	1.00	.95	1.00
24-26 fuel oil	.77½	.80	.77½	.80
20-22 fuel oil	.72½	.75	.72½	.75
Below 16 fuel oil	.60	.62½	.60	.62½
NORTH TEXAS—				
32-36 gas oil, industrial	.02⅛	.02¼	.02⅛	.02¼
22-26 fuel oil	.67½	.70	.67½	.70
Below 20 fuel oil	.60	.62½	.60	.62½
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.03	.03⅛	.03	.03⅛
14-16 fuel oil	.70	.75	.70	.75
ARKANSAS (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.03	.03⅛	.03	.03⅛
32-36 gas oil	.02⅞	.03	.02⅞	.03
14-16 fuel oil	.70	.75	.70	.75
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.02	.02⅛	.02	.02⅛
28-30 zero to 10, fuel oil	1.05	1.10	1.05	1.10
26-28 zero to 10, fuel oil	.95	1.00	.95	1.00
22-26 zero to 10, fuel oil	.82½	.87½	.82½	.87½
18-22 zero to 10, fuel oil	.67½	.72½	.67½	.72½
Below 18 fuel oil	.57½	.62½	.57½	.62½

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel in all these areas.

PENNSYLVANIA (inland refineries)—				
30-40	.03¾	.03⅞	.03¾	.03⅞
CALIFORNIA—				
Los Angeles:				
30-34 gas oil per bbl.	1.10	1.26	1.10	1.26
27 plus Diesel	1.10	1.15	1.10	1.15
27 plus Diesel (bunkers)	1.13	1.20	1.13	1.20
12-16 (bunkers at tidewater)	.82½	.85	.82½	.85
10-16 (cargo lots)	.70	.75	.70	.75
12-17 (tank cars)	.62½	.80	.62½	.80
San Joaquin Valley:				
10-18 (tank cars)	.60	.70	.60	.70
San Francisco:				
27 plus Diesel per bbl.	1.15	1.20	1.15	1.20
27 plus Diesel (bunkers)	1.19		1.19	
10-16 (bunkers)	.90		.90	
GULF COAST—				
28-30 gas oil	.03½	.03⅝	.03½	.03⅝
28-30 Diesel (bunkers)	1.70		1.70	
Bunker C (bulk cargoes)	.85	.90	.85	.90
Bunker C (bunkers)	.95	1.00	.95	1.00
NEW YORK (Bayonne, N. J.)—				
27 plus, gas oil	.04¾		.04¾	
28-30, Diesel (lighterage 6½ cents per bbl.)	1.89		1.89	
28-30 Diesel (tank cars)	.04¾		.04¾	
*Bunker C (to ocean-going ships in N. Y. harbor)	1.15		1.15	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

	Feb. 5		Jan. 29	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.10		.10	
180-3	.11¼		.11¼	
180-4	.10¾		.10¾	
200-3	.11¾		.11¾	
200-4	.11¼		.11¼	
240-3	.13¾		.13¾	
240-4	.13¼		.13¼	
280-3	.14¾		.14¾	
280-4	.14		.14	
300-3½	.15¼		.15¼	
400-4	.17¼		.17¼	
100-2 paraffin oil	.05¾		.05¾	
15-20 Cold Test:				
200-3	.10¾		.10¾	
200-4	.10¼		.10¼	
240-3	.12¾		.12¾	
240-4	.12¼		.12¼	
280-3	.13¾		.13¾	
280-4	.13		.13	
GULF COAST—				
Pale Oils:				
200-3	.07½	.07½	.07½	.07½
300-3	.07½	.08	.07½	.08
500-3½	.08½	.09	.08½	.09
750-3½	.09	.09¼	.09	.09¼
1,200-3½	.09½	.09¾	.09½	.09¾
2,000-4	.09¾	.10	.09¾	.10
Red Oils:				
200-5-6	.07	.07¼	.07	.07¼
300-5-6	.07¼	.07½	.07¼	.07½
500-5-6	.08	.08½	.08	.08½
750	.08½	.09	.08½	.09
1,200-5-6	.09¼	.09½	.09¼	.09½
CALIFORNIA (moving to domestic market)—				
Pale Oils:				
100-2½-3	.12½	.14½	.12½	.14½
200-2½-3	.12½	.14½	.12½	.14½
300-3-3½	.12½	.14½	.12½	.14½
350-3-4	.12½	.14½	.12½	.14½
400-3-4	.12½	.14½	.12½	.14½
450-3-4	.12½	.14½	.12½	.14½
550-3-4	.12½	.14½	.12½	.14½
600-3-4	.12½	.14½	.12½	.14½
Red Oils:				
200-4-5	.12½	.14½	.12½	.14½
300-5-6	.12½	.14½	.12½	.14½

350-5-6	.12½	.14½	.12½	.14½
400-5-6	.12½	.14½	.12½	.14½
450-5-6	.12½	.14½	.12½	.14½
500-5-6	.12½	.14½	.12½	.14½
600-5-6½	.12½	.14½	.12½	.14½
700-6½ plus	.12½	.14½	.12½	.14½
750-6½ plus	.12½	.14½	.12½	.14½
900-6½ plus	.12½	.14½	.12½	.14½
PENNSYLVANIA—				
150 vis. at 70° F., 3 color, 400-405 flash:				
Zero pour test	.24½	.25	.24½	.25
10 pour test	.23½	.24	.23½	.24
15 pour test	.23	.23½	.23	.23½
25 pour test	.22	.22½	.22	.22½
180 vis. at 70° F., 3 color:				
25 pour test	.24½	.25	.24½	.25
200 vis. at 70° F., 3 color:				
Zero pour test	.30½	.31	.30½	.31
10 pour test	.29½	.30	.29½	.30
15 pour test	.29	.29½	.29	.29½
25 pour test	.28	.28½	.28	.28½

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Feb. 5		Jan. 29	
Bright Stocks:				
190-200 D	.16½		.16½	
150-160 D, 0-10	.13½		.13½	
150-160 D, 10-25	.13		.13	
150-160 24-40	.12½		.12½	
150-160 E	.12½		.12½	
Steam refined:				
630 light green (treated)	.07½	.08	.07½	.08
600 light green (untreated)	.06	.08	.06	.08
600 dark green (untreated)	.04½	.07	.04½	.07
PENNSYLVANIA—				
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 210; 540-550 flash):				
10 pour test	.18½	.19	.18½	.19
15 pour test	.17½	.18	.17½	.18
20 pour test	.16	.16½	.16	.16½
25 pour test	.15½	.16	.15½	.16
Steam refined:				
600	.08	.09	.08	.09
650	.10	.11	.10	.11

600 Pennsylvania flash	.12		.11	.12
630 flash	.16	.17	.16	.17
600 Warren E filtered	.12	.13	.12	.13

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Feb. 5		Jan. 29	
124-126 white crude scale	.02¾	.03¼	.03⅛	.03¼
PENNSYLVANIA—				
122-124	.0290	.0295	.0300	.0305
124-126	.0295	.0300	.0305	.0310
NEW YORK—				
Wax (a.m.p.) in bags fully refined:				
120-122	.0420	.0430	.0420	.0430
123-125	.0440	.0460	.0440	.0460
125-127	.0445	.0470	.0445	.0470
130-132	.05	.0510	.05	.0510
133-135	.0545	.0570	.0545	.0570
135-137	.0570	.0595	.0570	.0595
124-126 crude scale	.02⅞	.0300	.03	.0310
Petrolatum in barrels in carload lots:				
Dark green	.01⅞		.01⅞	
Amber	.02⅞	.03	.02⅞	.03
Extra amber	.03	.03⅛	.03	.03⅛
Lily white	.06⅝	.06¾	.06⅝	.06¾
Snow white	.07¾	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*—				
122-124 wax	.0490	.0500	.0490	.0500
125-127 wax	.0515	.0525	.0515	.0525
127-129 wax	.0530	.0540	.0530	.0540
130-132 wax	.0590	.0600	.0590	.0600
132-134 wax	.0615	.0625	.0615	.0625

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F. a.m.p.

Export Prices

GASOLINE

GULF COAST—	Feb. 5		Jan. 29	
U. S. Motor	.04⅜	.04½	.04⅜	.04½
60-62 400	.04½	.04⅞	.04½	.04⅝
61-63 390	.04⅝	.04¾	.04⅝	.04¾
64-66 375	.04¾	.05	.04⅞	.05
LOS ANGELES, CALIF.—				
U. S. Motor grades:				
53-55 octane	.04	.04¼	.04	.04¼
55-65 octane	.04¼	.04½	.04¼	.04½
65-67 octane	.04½	.04¾	.04½	.04¾
67-69 octane	.04¾	.05	.04¾	.05
Above 69 octane	.05	.05¼	.05	.05¼
58-60 400 endpoint	.04¾	.05½	.04¾	.05½

KEROSENE

GULF COAST—				
41-43 prime white	.04¾	.04⅞	.04¾	.04⅞
41-43 water white	.05		.05	
44 water white	.05⅛	.05¼	.05⅛	.05¼
LOS ANGELES, CALIF.—				
41-43 water white	.04½	.04¾	.04½	.04¾

LUBRICANTS

NEW YORK (f.a.s. in bbls.)—				
Cylinder Stocks:				
600 Warren E	.19	.19½	.19	.19½
600 S.R. unfiltered	.14	.14½	.14	.14½
650 S.R. unfiltered	.16½	.17	.16½	.17
600 flash S.R.	.17½	.18	.17½	.18
630 flash S.R.	.22	.22½	.22	.22½
Bright Stocks:				
8 color	.22	.22½	.22	.22½
6½ plus colors in dilution	.21	.21½	.21	.21½

NEUTRAL OILS

200-3 color	.34½	.35	.34½	.35
150-3 color	.28½	.29	.28½	.29

PARAFFIN WAX (Fully Refined)

NEW YORK (prices per pound):				
120-122 a.m.p.	.0405	.0425	.0405	.0425
123-125 a.m.p.	.0435	.0455	.0435	.0455
125-127 a.m.p.	.0440	.0465	.0440	.0465
128-130 a.m.p.	.04¾	.0490	.04¾	.0490
130-132 a.m.p.	.0495	.0505	.0495	.0505
133-135 a.m.p.	.0540	.0565	.0540	.0565
135-137 a.m.p.	.0565	.0590	.0565	.0590

Crude Oil Gravity Table

Gravity—	Oklahoma and Kansas 1	North Texas, Central Texas and East Central Texas 2	North Louisiana and Arkansas 3	Gray County, Texas 4	Carson, Hutchinson and Moore Counties, Texas 5	Conroe, Texas 6	Salt Creek, Wyo. 7	Gulf Coast, Texas and Louisiana 8	Gulf Coast, Texas and Louisiana 9	Cotton Valley, Louisiana 10
Below 20	....	....	....	....	....	....	....	$.82	$.82	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.05	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.06	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1.02

Effective December 3, 1934, Panhandle Refining Co., purchasing oil in North Texas, posted below 29 degrees, 68 cents; 29-29.9 degrees, 70 cents, with 2 cents added for each additional degree up to 40 and over, at 92 cents.

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedule: Below 25°, 76 cents; 25-25.9°, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08; Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedules at below 29°, 84 cents, excepting Phillex Oil Co., which begins with below 31° at 88 cents.

Column 1—Effective September 29, 1933, Texas Co. of Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Phillex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; October 1, by Barnsdall Refineries, Inc., in Oklahoma.

Column 2—Effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective January 14, 1935, in the Van Pool, Van Zandt County, Pure Oil Co. posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03.

Column 3—Effective September 29, 1933, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25°, 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03.

Column 4—Effective September 29, 1933, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day, Philtex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 5—Effective September 29, 1933, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Philtex Oil Co. posted below 31°, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 6—Effective September 29, 1933, by Humble Oil & Refining Co. and Tide Water Oil Co., and on September 30 by Texas Co., which on September 29 had posted a schedule of $1.07 to $1.13 with a 1-cent spread on each degree.

Column 7—Effective September 29, 1933, by Stanolind Oil & Gas Co.

Column 8—Effective September 29, 1933, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana, 20-20.9°, 84 cents, with 2 cents added for each degree upward to 34 and over at $1.12; and in Cameron Meadows and Iowa, Louisiana, below 20°, 72 cents, with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20°, 70 cents, with 2 cents added for each degree upward to 24° and over at $1; and in Black Bayou and White Castle, Louisiana: Below 20°, 80 cents, with 2 cents added for each degree upward to 34° and over at $1.10.

Column 9—Effective September 30, 1933, Texas Co. (On September 29 Texas Co. has posted a schedule of 2 cents on each degree, but changed it on September 30.)

Column 10—Effective September 29, 1933, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 81)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas $1.00
Corsicana (heavy) (June 17, 1933)* ..... .82
Other fields ..... (See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Sanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co., Empire Oil & Refining Co., and Atlas Pipe Line Co. posted 40 cents per barrel in East Texas, but on November 3 resumed its posted price of $1 per barrel, making it retroactive to October 22.

*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933) ..... $.70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933) ..... .76
Pecos County, Yates shallow Pool (Sept. 29, 1933)* ..... .65
Jones and Fisher Counties*. See gravity table

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers. ..... (See gravity table)
Tomball (see note)* $1.15
Livingston (Sept. 29, 1933)† 1.00
Cleveland (Jan. 11, 1934) 1.00
Greta (Sept. 29, 1933) ..... .85
Refugio, light ..... (See gravity table)
Refugio, heavy (Sept. 29, 1933)‡ ..... .85
Markham and High Island ..... (See Gulf Coast gravity table)
Conroe ..... (See Conroe gravity table)
Bosco, La. (Oct. 15, 1934)§ $1.02

Note—Tomball, effective September 29, by Humble Oil & Refining Co. and October 2 by Magnolia Petroleum Co., and November 10 by Stanolind Crude Oil Purchasing Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy by Humble Oil & Refining Co. Cleveland (Liberty County) posted by Magnolia Petroleum Co. §Bosco posted by Pure Oil Co.

South Central and Southwest Texas

(See note below table)

Darst Creek ..... $.87
Mirando ..... .80
Luling (Sept. 29, 1933) 76
Pettus 1.06
Salt Flat ..... .87
Lytton Springs (Sept. 29, 1933) ..... .95
Duval County (Sept. 29, 1933) ..... .80
Saxet ..... .85

Note—Effective on September 29 by Humble Oil & Refining Co. in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by

(Continued on Page 81)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

February 5, 1935

Taxes

The gasoline quotations given in the following tables include the 1-cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon or 3 cents a gallon off retail prices is permitted for purchases running between 4,000 and 10,000 gallons a month, or 4 cents a gallon off retail prices for purchase in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	18.0	20.0	5.0	13.6
Pueblo	17.0	19.0	5.0	13.0
Grand Junction	18.5	20.5	5.0	15.0
Casper, Wyo.	18.0	20.0	5.0	11.5
Cheyenne	18.0	20.0	5.0	13.0
Butte, Mont.	21.0	23.0	5.0	17.5
Billings	22.0	24.0	6.0	16.5
Helena	23.0	25.0	6.0	17.5
Great Falls	21.5	23.5	6.0	17.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Boise, Idaho	22.5	24.5	6.0	18.0
Twin Falls	22.5	24.5	6.0	18.0
Albu'que, N. M.	18.0	20.0	*6.5	13.0

*One-half cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Standard Oil Co. (Indiana)

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago	14.3	16.3	4.0	8.0
Decatur, Ill.	14.1	16.1	4.0	10.0
E. St. Louis	14.1	11.0	4.0	9.5
Joliet	14.5	16.5	4.0	10.2
Peoria	14.7	12.5	4.0	10.2
Quincy	15.9	14.9	4.0	10.0
Davenport, Ia.	14.2	14.0	4.0	10.1
Des Moines	14.1	16.1	4.0	10.1
Mason City	14.4	16.4	4.0	10.1
Sioux City	14.3	16.3	4.0	9.7
Duluth, Minn.	15.0	17.0	4.0	10.4
Mankato	14.7	16.7	4.0	9.5
Minneapolis	15.0	17.0	4.0	10.4
LaCrosse, Wis.	15.7	17.7	4.0	10.8
Green Bay	15.9	17.9	5.0	10.2
Milwaukee	15.3	17.3	5.0	9.0
Madison	16.0	18.0	5.0	9.9
Detroit, Mich.	15.0	17.0	4.0	10.5
Grand Rapids	14.7	16.7	4.0	10.2
Saginaw	15.0	17.0	4.0	10.5
Evansville, Ind.	16.3	18.3	5.0	10.0
Indianapolis	16.1	18.1	5.0	10.2
South Bend	16.4	18.4	5.0	9.0
Fargo, N. Dak.	15.7	17.7	4.0	11.4
Huron, S. Dak.	16.2	18.2	5.0	11.4
Sioux Falls	15.6	17.6	5.0	10.9
Kans. C., Mo.*	12.6	15.6	4.0	7.5
Springfield	13.2	15.2	4.0	8.8
St. Louis	14.2	16.2	3.5	8.7
St. Joseph*	13.6	15.6	4.0	7.8
Wichita, Kans.	13.2	15.2	4.0	7.5
Bartlesville, Ok.	15.7	18.2	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

Discounts to dealers: Undivided accounts, 3½ cents on premium and regular and 2½ cents on third grade off service station prices; divided accounts one-half cent less than undivided. Where prices are more than 1 cent below normal, the discounts are one-half cent less than above.

Naphtha

	Tank wagon*
Oleum spirits	16.7
V.M.&P. naphtha	18.0
Cleaners' naphtha	18.0
Stanisol	18.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax nor 2 per cent retail occupational tax.

Prices f.o.b. Chicago, January 5, 1935. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Stanolax Furnace Oil in Chicago

Effective Jan. 2, 1935, f.o.b. Chicago tank wagon prices: Range oil, less than 80 gallons, 8¼ cents; 80-149 gallons, 7⅛ cents; 150 gallons and more, 7 cents. No. 1 (36-40 lt. stw. zero), less than 100 gallons, 8¼ cents; 100-149 gallons, 7⅛ cents; 150 gallons or more, 6¾ cents; No. 2 (30-34, stw. zero), less than 150 gallons, 7⅛ cents; No. 3 (23-26, zero), less than 150 gallons, 7 cents; No. 4 (13-16 zero), less than 400 gallons, 7 cents; viscosity of No. 4, 85 at 100° F.; No. 5, less than 400 gallons, 5¾ cents For deliveries of more than stated quantities of Nos. 2, 3, 4 and 5, deduct 1 cent.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	19.0	21.0	7.0	15.0
Augusta	18.0	19.0	7.0	15.0
Macon	19.0	21.0	7.0	15.0
Savannah	17.5	19.5	7.0	14.0
Birm'ham, Ala.	19.5	21.5	8.0	14.5
Mobile	17.0	18.0	8.0	13.0
Montgomery	18.5	19.5	8.0	15.5
Jackson, Miss.	18.5	20.5	7.0	13.0
Vicksburg	18.0	19.5	7.0	14.5
Jack'ville, Fla.	18.0	20.0	8.0	11.5
Miami	18.0	20.0	8.0	13.5
Pensacola	19.0	21.0	8.0	13.5
Tampa	18.0	20.0	8.0	13.5
Lexington, Ky.	15.5	17.5	6.0	11.5
Covington	14.5	15.5	6.0	12.5
Louisville	15.5	16.5	6.0	13.0
Paducah	14.5	15.5	6.0	12.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	12.0	14.0	5.0	7.0
Fort Worth	12.0	14.0	5.0	7.0
Houston	12.0	14.0	5.0	7.0
San Antonio	18.0	18.0	6.0	9.5
El Paso	16.0	16.0	5.0	10.0
Muskogee, Ok.	16.0	18.0	5.0	7.5
Okla. City	16.0	18.0	5.0	7.5
Tulsa	16.0	18.0	5.0	7.5
Ft. Smith, Ark.	14.1	16.5	6.0	9.0
Little Rock	16.6	19.0	7.5	9.0
Texarkana	14.0	14.0	5.0	7.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N.J.	13.4	16.9	4.0	9.0
Newark	12.7	16.2	4.0	8.5
Annapolis, Md.	14.5	18.0	5.0	10.0
Baltimore	14.0	17.5	5.0	8.5
Cumberland	15.0	18.5	5.0	12.7
Wash'g'n, D. C.	12.0	15.5	3.0	11.5
Danville, Va.	16.5	20.0	6.0	12.9
Norfolk	15.0	18.5	6.0	11.3
Petersburg	15.5	19.0	6.0	11.4
Richmond	15.5	19.0	6.0	11.7
Roanoke	16.5	20.0	6.0	12.9
Charls'n, W.Va.	15.0	18.5	5.0	12.6
Parkersburg	14.5	18.0	5.0	11.2
Wheeling	14.0	17.5	5.0	12.3
Charlotte, N. C.	16.0	19.0	7.0	13.5
Hickory	16.5	19.5	7.0	13.7
Mt. Airy	17.0	20.0	7.0	13.8
Raleigh	16.5	19.5	7.0	13.3
Salisbury	16.5	19.0	7.0	13.6
Charleston, S.C.	15.2	18.7	7.0	11.3
Columbia	16.5	19.5	7.0	13.2
Spartanburg	17.4	20.9	7.0	13.5

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	15.9	17.9	5.0	10.0
McCook	16.6	16.9	5.0	10.7
Norfolk	16.3	18.3	6.0	10.4
North Platte	16.7	17.7	5.0	10.0
Scottsbluff	17.4	19.4	5.0	11.5

Note: Discounts to dealers; where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal, resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Corwn, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank wagon deliveries covered only by Standard Commercial Consumers Contract, effective Jan. 1, 1935.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.	14.5	17.5	‡8.0	10.5
Baton Rouge	15.2	18.7	†7.0	12.0
Alexandria	16.1	19.6	†*8.0	10.0
Lafayette	16.3	19.3	‡*8.0	12.0
Lake Charles	16.2	19.7	†*8.0	12.0
Shreveport	13.0	16.0	†7.0	12.0
Knoxville, Tenn.	18.7	22.2	8.0	13.5
Memphis	17.0	20.5	8.0	10.5
Chattanooga	18.0	21.0	8.0	11.0
Nashville	18.0	21.5	8.0	12.0
Bristol	17.0	20.5	8.0	14.0

*Includes city tax of 1 cent.

‡Includes 3-cent parish tax. †Includes 1-cent parish tax.

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero-
	Tank wagon†	Posted retail	Incl'ds tax of	tank wagon
San Francisco	16.5	18.5	4.0	12.5
Los Angeles	15.5	17.5	4.0	12.5
Fresno, Calif.	17.0	19.0	4.0	14.0
Proenix, Ariz.	20.0	22.0	6.0	‡16.0
Reno, Nev.	19.0	21.0	5.0	15.5
Portland, Ore.	19.0	21.0	6.0	13.5
Seattle, Wash.	19.0	21.0	6.0	13.5
Tacoma	19.0	21.0	6.0	13.5
Spokane	17.5	19.5	6.0	13.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

‡Includes 5-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Phil'delphia, Pa.	14.0	18.0	4.0	9.0
Pittsburgh	15.0	17.0	4.0	10.0
Allentown	14.5	16.5	4.0	10.0
Erie	12.5	12.5	4.0	9.0
Scranton	15.0	17.0	4.0	10.0
Altoona	15.0	17.0	4.0	10.0
Dover, Del.	14.5	16.5	4.0	10.0
Wilmington	14.5	16.5	4.0	9.0
Springf'd, Mass.	12.5	17.0	4.0	8.5
Worcester	13.5	17.0	4.0	9.0
Hartford, Conn.	12.5	16.0	3.0	8.0
New Haven	12.5	16.0	3.0	8.5
Providence, R.I.	12.0	15.5	3.0	8.5

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Canada*

Imperial 3-Star Gasoline

IMPERIAL OIL, LTD.

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Hamilton, Ont.	†22.0	25.0	6.0	17.5
Toronto, Ont.	†22.0	25.0	6.0	17.5
Brandon, Man.	30.2	33.2	7.0	21.5
Winnipeg, Man.	28.7	31.7	7.0	20.2
Regina, Sask.	29.0	32.0	6.0	21.5
Saskatoon, Sask.	31.5	34.5	6.0	24.3
Edmonton, Alta.	31.2	34.2	6.0	23.7
Calgary, Alta.	28.5	31.5	6.0	21.0
Vancouver, B.C.	27.0	30.0	7.0	24.0
Montreal, Que.	24.0	27.0	6.0	17.0
St. John, N.B.	26.0	30.0	8.0	19.5
Halifax, N. S.	26.0	30.0	8.0	19.5

*Imperial gallon used in Canada. †Governed by service station price.

Maritime provinces, all dealers 4 cents off service station price. All other provinces open dealers 3 cents per gallon off service station price (except Toronto and Hamilton cities which are—open dealers 2½ cents off service station price) 1 cent additional to 100 per cent accounts.

New York and New England

SOCONY-VACUUM CO., INC.

	Gasoline			Kero-
	Posted dealer	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	13.5	17.0	4.0	8.5
Met. New York	13.0	16.5	4.0	8.75
Br'klyn, Queens	13.0	16.5	4.0	8.5
Buffalo	9.5	12.0	4.0	8.0
Rochester	10.0	12.5	4.0	8.5
Syracuse	13.5	17.0	4.0	8.75
Boston, Mass.	13.0	16.5	4.0	8.5
Portland, Me.	15.0	18.5	5.0	8.75
Manch't'r, N.H.	15.0	18.5	5.0	9.0
Burlington, Vt.	16.5	20.0	5.0	9.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points	15.5	17.5	5.0	*13.5

*Includes state tax of 1 cent, effective July 22.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Atlantic Refining Co., January 29, reduced tank wagon kerosene one-half cent in New Haven.

Standard Oil Co. of Louisiana, January 19, reduced tank wagon gasoline 1 cent and station gasoline 1.5 cents in Shreveport. January 23, advanced tank wagon kerosene 1.5 cents in New Orleans.

Standard Oil Co. of New Jersey, January 28, advanced tank wagon gasoline one-half cent in Atlantic City and Newark.

Standard Oil Co. of California, January 28, reduced tank wagon and station gasoline 1.5 cents in Spokane; January 29, reduced them 1 cent further; January 30, reduced them 1 cent further.

Standard Oil Co. of Indiana, February 2, reduced tank wagon and station gasoline .3 cent in Chicago; reduced tank wagon gasoline .3 cent, advanced station gasoline 3.4 cents and reduced tank wagon kerosene .2 cent in Decatur; advanced station gasoline 3.4 cents in Evansville.

Socony-Vacuum Oil Co., Inc., January 26, advanced tank wagon and station gasoline one-half cent in Buffalo. January 28, advanced tank wagon and station gasoline one-half cent in Rochester.

Magnolia Petroleum Co., January 30, reduced tank wagon and station gasoline 2 cents in Houston. February 2, reduced tank wagon and station gasoline 2 cents in El Paso.

Continental Oil Co., January 31, reduced tank wagon and station gasoline 1 cent in Pueblo.

CRUDE OIL PRICE CHANGES

The price of Pennsylvania Grade oil was advanced 15 cents by all purchasers, effective February 4. This affects oil produced in New York, Pennsylvania, southeastern Ohio and West Virginia of the grade named.

The National Refining Co. reduced the price of Lima, Ohio, oil 15 cents effective February 1, and the Ohio Oil Co. met the price.

POOL PLANS APPROVED

WASHINGTON, D. C., Feb. 4.—Administrator Ickes has approved drilling programs for 1935 for the Cayuga Pool, Anderson and Freestone Counties, Texas, and the Abbeyville Field, Reno County, Kansas. The Cayuga program rate of development for 1934 shall continue into 1935 until 75 oil wells have been completed, when the operators are required to submit a program. The plan for the Abbeyville Field was extended to 1935.

A six-page illustrated bulletin obtainable from Ingersoll-Rand Co., 11 Broadway, New York, gives details concerning the Ingersoll-Rand Pott impact wrench for handling nuts and described as "the greatest pneumatic invention" for shop work.

NEWS FOR SALES DEPARTMENTS

Type of Metal Determines Oiliness of Lubricants

By W. F. PARISH and LEON CAMMEN

The mystery of oiliness is due to the lack of the proper methods of measuring this important property of lubricants. Friction and oiliness testing machines have not checked with each other nor have they agreed with service records. (Lub. Res. Subcommittee S.A.E. J.S.A.E. May, 1932, page 25, Mayo D. Hersey, mechanical engineer, September, 1933, page 561). This is due to a number of factors, the most important being the action of the machine bearings. The metals involved play as important a part in oiliness as do the oils themselves.

Were viscosity the dominating factor in lubrication, mercury would be a superlubricant, and yet it is absolutely valueless in this capacity. This is due ot the fact that no liquid can act as a lubricant unless it wets the surfaces concerned, not one but both, and mercury will not "wet" solids. All lubricants produce more or less wetting, but the degree has been left out of consideration. Now we have reached a stage of machine operation (unit loads and speed) where rough approximations are not enough and a precise knowledge of lubrication is an imperative necessity.

It is not enough that the liquid should merely wet the surface of the bearing or the shaft to make it a good lubricant, though any liquid that wets the surfaces concerned will act as a lubricant to some extent. Chemical physics will explain why. All fluids, be they liquids or gases, consist of molecules carrying certain electrical charges, which in turn create about the molecule a field of force, usually unsymmetrical, which means stronger at one end than the other. There are also fields extending from the surfaces of solid bodies such as shafts and bearings, and if these fields are of one kind with respect to the fields on the molecules, attraction results and it is called wetting. If the opposite electrical condition exists, there is repulsion and no wetting takes place. Devaux produced these differences in wetting artificially, so that one side of a piece of fat would be wetted by water and the other would not. Wetting therefore means the attraction between a fluid (liquid or gas) and a solid and may be of many degrees of intensity. In fact, under certain circumstances, the difference may be so great that one liquid will shoulder another out of the way and take its place in contact with a solid. Thus, kerosene displaces water in contact with copper, but gives way to water on quartz, and alcohol displaces oil in contact with most metals (which must be considered as part of the problem of lubricating internal combustion engines running on alcohol blends).

In the case of lubricants subjected to powerful forces tending to dislodge them, merely wetting is obviously insufficient, and what is needed is the ability of the true lubricants (contained in the oil carrier or matrix) to cling so vigorously to the lubricated surfaces that they cannot be pushed aside. As shown above, this depends not only on the lubricants, but also on the surfaces against which they have to operate. The following definition of oiliness is therefore offered as being in complete accordance with our modern knowledge of chemical physics:

"Oiliness is the ability of the true lubricant contained in the oil to cling to the surface to be lubricated, and depends on three factors: First, structure of the fields of force surrounding the

(Continued on Page 42)

MISSOURI TAX BILLS

JEFFERSON CITY, Feb. 4.—Products of the petroleum industry would be taxed on a graduated basis under provisions of a bill introduced in the house of representatives by Representative L. J. Fontana, St. Louis.

The following schedule of taxes is proposed on individuals dealing or distributing the various by-products:

Lubricating oils, .06 cent a gallon; paraffin and all other petroleum wax products, .01 cent a pound; crude petroleum, .005 cent a gallon; fuel oil derived from petroleum, one-half cent a gallon; gas oil derived from petroleum and all other liquid derivatives of crude petroleum except gasoline and vehicle propelling fuels, one-half cent a gallon.

DISTRIBUTING INTERESTS SOLD

VANCOUVER, British Columbia, Feb. 2.—Announcement has been made of the purchase by Austin Taylor of Vancouver of the 25 per cent interest in Home Oil Distributors, Ltd., owned by the Home Oil Co. at a price of $66,000. Home Oil Distributors, Ltd., organized some years ago, has been distributing petroleum products in British Columbia.

OIL TRADES ASSOCIATION

NEW YORK, Feb. 4.—Over 300 members and guests attended the quarterly meeting of the New York Oil Trades Association held here Tuesday night in the Roof Garden of the Hotel Waldord-Astoria. Walter Saybolt, of the Standard Oil Co. of New Jersey, is president of the association. It was announced that the annual election would be held March 14. It is understood that Rudolph G. Sonneborn, president of L. Sonneborn Sons, Inc., will succeed Mr. Saybolt as president.

NOVEMBER EXPORTS

The following statistics of exports of petroleum and its products for the month of November, 1934, are furnished by the U. S. Department of Commerce:

Exports—	Bbls.
Petroleum	4,679,916
Natural gasoline	313,126
Gasoline	1,832,671
Illuminating oil	625,410
Gas oil	1,006,722
Fuel oil	1,132,767
Lubricating oil	658,199
Greases (lbs.)	7,393,664
Paraffin wax (lbs.)	17,480,335
Petroleum asphalt (tons)	13,088
Petroleum coke (tons)	14,654

O. H. CARLISLE » » »

O. H. CARLISLE, district sales manager of the Gulf Refining Company for the State of Texas with headquarters at Houston, has been actively engaged in the marketing of petroleum products since 1898. He dates his experiences in this business to the days of the Waters-Pierce Oil Company in Texas when he started to work as a clerk and general all around helper in the warehouse of that company at Brenham, his home town, following his return from service in the Spanish-American War.

His record at Brenham won him a transfer to Beaumont in 1901 where he assumed additional duties and responsibilities due to the greater volume of business handled at that point. Later he was transferred to Houston, where he was when he accepted a position with the Southwestern Oil Company as manager of the North Louisiana and Arkansas district with headquarters at Shreveport. The latter company, whose main office was at Houston did an extensive business extending over Texas, Louisiana and Arkansas.

Leaving the Southwestern Oil Company on December 3, 1904, Mr Carlisle became associated with the Gulf Refining Company. The company then was just establishing Texas as a separate sales district, the State heretofore having been under the jurisdiction of the New Orleans office and Mr. Carlisle was the first man to be employed by the Gulf Refining Company in connection with the creation of the new district. At that time the company had just one agency in Texas, that being at Sherman. Headquarters were established in Houston, and in February, 1905, the first agency, outside of the one previously in existence at Sherman, was started at Houston under Mr. Carlisle's supervision.

Later, with the employment of a local agent for the Houston area, Mr. Carlisle was made special agent and devoted his attention to the starting of additional agencies, warehouses and bulk plants throughout the State. In 1909, he was promoted to the position of assistant manager of the district, and three years ago he received further advancement to his present position.

Motor Fuel Consumption Declines During November

Consumption of gasoline in the United States suffered a slight monthly decline in November as the daily average dropped from 49,386,000 gallons to 47,185,000 gallons. The figure was still well above that of the year preceding and tends to show that the year will total a billion gallons over 1933. The yearly increase is with few exceptions reflected in all states. The following table is based on the quantity of gasoline sold or offered for sale as reported by wholesalers and dealers in the states listed, under provisions of the gasoline tax or inspection laws.

GASOLINE CONSUMPTION BY STATES, NOVEMBER, 1934

	Nov. 1934 Gallons	Nov. 1933 Gallons
Alabama	13,852,000	11,799,000
Arizona	6,270,000	5,736,000
Arkansas	12,718,000	11,151,000
California	108,657,000	131,034,000
Colorado	13,995,000	12,547,000
Connecticut	21,022,000	20,135,000
Delaware	3,348,000	3,721,000
Dist. of Columbia	9,022,000	8,282,000
Florida	20,847,000	17,054,000
Georgia	22,163,000	18,408,000
Idaho	5,432,000	4,823,000
Illinois	92,291,000	77,854,000
Indiana	41,430,000	34,620,000
Iowa	34,983,000	32,242,000
Kansas	29,673,000	*25,975,000
Kentucky	15,965,000	14,170,000
Louisiana	14,377,000	14,547,000
Maine	9,421,000	8,545,000
Maryland	17,422,000	15,696,000
Massachusetts	46,708,000	45,661,000
Michigan	64,220,000	56,451,000
Minnesota	38,813,000	31,747,000
Mississippi	12,576,000	10,423,000
Missouri	43,629,000	38,851,000
Montana	6,702,000	4,894,000
Nebraska	19,227,000	16,785,000
Nevada	1,862,000	1,746,000
New Hampshire	5,360,000	5,054,000
New Jersey	69,327,000	54,370,000
New Mexico	4,943,000	4,046,000
New York	126,930,000	120,137,000
North Carolina	27,329,000	22,071,000
North Dakota	9,192,000	5,978,000
Ohio	82,362,000	74,466,000
Oklahoma	24,367,000	22,780,000
Oregon	12,551,000	12,137,000
Pennsylvania	97,433,000	85,878,000
Rhode Island	8,500,000	7,589,000
South Carolina	11,911,000	9,664,000
South Dakota	10,103,000	7,972,000
Tennessee	21,250,000	16,265,000
Texas	70,727,000	67,506,000
Utah	5,344,000	4,351,000
Vermont	4,050,000	3,481,000
Virginia	22,602,000	19,368,000
Washington	19,750,000	18,361,000
West Virginia	12,974,000	10,843,000
Wisconsin	36,714,000	29,408,000
Wyoming	3,303,000	2,762,000
Total	1,415,547,000	1,279,384,000
Daily average	47,185,000	42,646,000
Change from previous year:		
Total change	136,163,000	.....
Percentage change in daily average	+10.64%	.....

*Revised.

CARLOAD EXPANSION

BUFFALO, N. Y., Feb. 2.—Carload Gas Station, Inc., with headquarters in this city, plans to expand its facilities in Cleveland, Ohio, where the firm now operates four filling stations. Property has been acquired at Broadway and Central Avenue, on which it is planned to build a fifth unit to cost about $35,000. Plans also provide for construction of a trunk line switch to connect with the Nickel Plate Railroad.

SALES TAX DECISION

The Bureau of Internal Revenue has issued the following ruling on the taxability of sales of articles to a state for the use of the National Guard:

"The maintenance of the National Guard constitutes the exercise by the state of an essential governmental function. Accordingly, upon compliance with the provisions of the law and regulations, sales of articles to a state for the use of the National Guard are exempt from the taxes imposed by Title 4 of the Revenue Act of 1932."

Mechanically Wrapped and Coated Pipe Helps Fight Against Corrosion

By ANDREW M. ROWLEY

Better protection of pipe against corrosion, the dream of engineers for years, seems to have progressed a long way towards solution through mechanical application of coating and wrapping at the pipe mills. Petroleum industry engineers and pipe and coating manufacturers long have recognized the fact that many failures of coatings have been due to a large extent to improper application in the field.

Mechanical coating and wrapping at pipe mills has been gaining steadily in favor among a large number of pipe consumers and investigations conducted recently on a number of pipe lines in widely scattered areas tends to prove coatings and wrappings applied at the pipe mill stand up better and give longer protection to pipe than coatings and wrappings applied in the field even under the best of circumstances.

For many years pipe mills in England and Germany had wrapped and coated pipe at their mills. Seeing a shipment of this pipe unloaded on the docks at Houston, Tex., engendered the idea which has resulted in a widespread application of this principle in the United States. R. H. Hubbell, then president of Hill, Hubbell & Co., with David Boylan of Tulsa, who was associated with Mr. Hubbell, were making an intensive survey of pipe corrosion problems throughout the United States in an endeavor to find some method of giving better protection to pipe than the average coatings and wrappings applied in the field.

Six Large Mills Use Plan

These men happened to be in Houston when a boat load of mill wrapped and coated pipe from Germany was unloaded. They inspected the pipe carefully and immediately became convinced mill wrapping and coating would be a big factor in the solution of the problem. The Hill, Hubbell & Co., which is a division of the General Paint Corp., then devised a method and machinery for coating and wrapping pipe at the pipe mills. Steel pipe manufacturers became interested in the plan and a co-operative agreement was made between the Hill, Hubbell & Co. division of General Paint Corp. and a number of steel mills whereby the wrapping and coating machinery was installed right in the mill.

At the present time six large steel mills have this arrangement in effect, they being the Central Tube Co., Jones & Laughlin Steel Corp., National Tube Co. and Spang, Chalfant & Co., Inc., of Pittsburgh; and Republic Steel Corp. and the Youngstown Sheet & Tube Co., of Youngstown, Ohio. At each of these mills the Hill, Hubbell & Co. division of the General Paint Corp. has coating and wrapping machinery installed and coats and wraps pipe as it comes from the pipe mill.

Advantages cited for mechanical application of hot bituminous coating to pipe at the mills include absence of possible moisture on the pipe, entrapped by the primer; accurately controlled temperature of the bitumen, ensuring uniform thickness of the coating; elimination of air bubbles and freedom from skips and holidays in the primer or in the coating; the application of multiple coatings at initial labor cost; and finally close supervision of every step in the operation as well as careful inspection of all materials.

Just as bare pipe must be free from moisture when the primer is applied, so must the primed pipe be free from moisture when the hot bituminous coating is applied. The presence of moisture would prevent the intimate bond between the bitumen and the primer. In the field there are comparatively few hours during the day when primed pipe is entirely free from atmospheric condensation. In the mill, all work being done indoors, no such condensation problem arises.

Device being used in Illinois for holding pipe in place for welding

All bitumens, used in coatings, possess certain recommended working temperatures. Preservation of physical properties of the bitumen demands that these temperatures be limited to a comparatively narrow range. In the plants installed in the pipe mills, all bitumen is heated in kettles with the heat automatically controlled by thermostats. In addition the heating material is constantly agitated to make the quality uniform throughout.

More Than 5,680 Miles Shipped

Since the Hill, Hubbell & Co. installed its first plant for wrapping and coating pipe in a pipe mill in August, 1928, that company has coated, wrapped and shipped more than 5,680 miles of pipe from the mills listed above. During this period the damage to the wrapping or coating on the pipe has totaled less than $100, one official of the company saying he thinks the total paid customers for damages being about $15.

Many pipe users were somewhat reluctant to order mill wrapped and coated pipe because of an impression coatings would be damaged in shipment. Mill wrapped and coated pipe has been shipped to every section of the United States and to a dozen or more foreign countries, without any damage being done to the coating or wrapping.

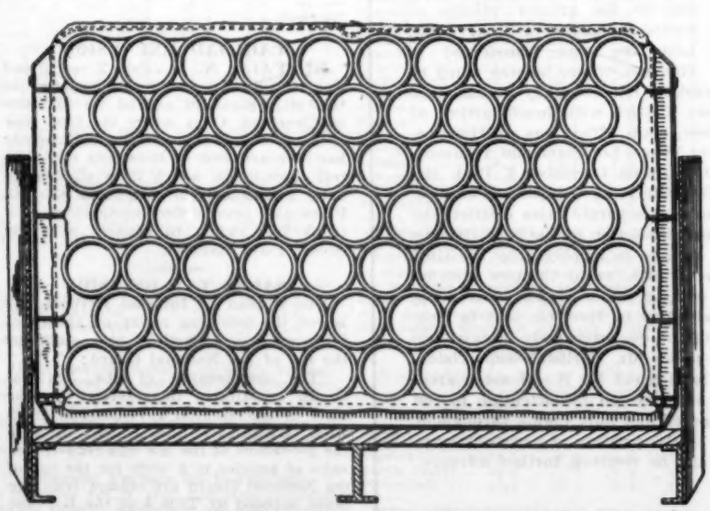
Shortly after the company started to coat and wrap pipe at the mill, engineers of the General Paint Corp. devised a method of loading the pipe in railroad cars which would protect the pipe and coatings from damage. They had this plan patented and then assigned this patent to the American Railways Association so that anyone could use it. Their idea was to assure pipe consumers with the fact that they did not want to "hold them up" or force them to use any certain manufacturer's products just because this better type of loading had been patented.

This patented method of loading is an adaptation of a packaging system widely used in bundling units of heavy general merchandise. In effect, it consists of securely tying the lengths of wrapped pipe into a single bundle and so placing it in a gondola car that there can be no chafing of the pipe against the floor or sides of the car nor between the lengths of the pipe themselves.

Patented Method of Loading

As shown in the accompanying illustration, when a car is to be loaded, the bottom skids, which are shorter than the width of the car, are covered with a thick layer of padding, and on this the first layer of pipe rests. The inside of the vertical side stakes, which are placed on top of the bottom skids so that half their width extends beyond the ends of the skids, is covered with paper wrapped pads, securely held in place by metal ties around the stakes. Blocks of wood are inserted between the stakes and the car's sides and a 2-inch steel band of high tensile strength is passed under each bottom skid, thence upward on the outside of each adjacent side stake. After loading the stakes are sawed off to proper length and the two ends of steel band are laid across the uppermost tie of pipe over a layer of padding and then the steel bands are stretched and sealed. The whole load then is one bundle and any movement must be a movement of the whole and not of any part rubbing or moving against another.

This coating and wrapping of pipe at the mill is not confined to pipe to be wrapped or coated with materials manu-



Patented method of loading wrapped and coated pipe

factured by the General Paint Corp. or the Hill, Hubbell & Co. division of that firm. Coating material and wrappings of any company specified by the buyer of the pipe is used and the Hill, Hubbell & Co. maintains at each of its mill plants adequate stocks of coating material and wrapping manufactured by a number of other principal coating and wrapping manufacturers.

Coat from Three-Quarter to 30-Inch

Any size pipe from three-quarters inch to and including 30-inch can be coated and wrapped at the mills listed above. For pipe to be welded, a bare space is left at each end of the pipe, this space being 12 inches wide at each end for welding. A space of 8 inches is left for pipe to be connected by Dresser or Dayton couplings; 6 inches for pipe where Victaulic couplings are to be used; and 4 inches where the pipe is to be threaded and coupled.

Consequently, in welded pipe lines, there is only a space of 2 feet to be coated and wrapped in the field for every 40 feet of pipe. It is claimed with such a small space to be coated and wrapped in the field, the field men are more careful in their work and make a better job on this 2-foot space than would be the case were the whole 40-foot joint to be coated and wrapped.

This method of coating and wrapping pipe at the mills permits 6 miles of pipe to be coated and wrapped in a day and shipped from the mill.

Mill wrapped and coated pipe pulled through casing under street crossing

Oil and Gas Maps Show Data on 10,000 Wells

In a series of 19 maps of the oil and gas-producing states in this country there has been set forth information about some 10,000 wildcat tests drilled in the Rocky Mountain, Mid-Continent, Gulf Coast and California oil provinces. These maps were drawn by James C. Bransford, engineer, of Los Angeles, Calif., and represent several years study and time devoted to collecting and compiling data. The maps not only show the location of the wildcat operations, but the ownership and name of wells, depth and condition, whether drilling, completed, uncompleted, gas or abandoned, at time of last report.

The states covered by the maps are Washington, California, Montana, Wyoming, South Dakota, Nebraska, Utah, Colorado, Kansas, New Mexico, Oklahoma, Arkansas, Mississippi, Alabama, Louisiana and Texas. Texas is represented by four maps, North and East Texas, Gulf Coast and Southeast Texas, West Texas, and Panhandle of Texas. The maps vary in size from 21x31 inches to 36x52 inches. Oil and gas fields are clearly indicated and the maps have been revised to December, 1934, and are being constantly worked on to keep them up to date.

A sample layout identifying each map of the set may be procured by writing the California Map & Blue Print Co., 1127 W. P. Story Building, Los Angeles, Calif., and they can be obtained printed on plain paper, cloth-backed maps and maps prepared for folding. The prices vary from $2.50 to $6 per map.

Gasoline Flounders at Low Price Levels in Group 3

(Continued from Page 24)

prices firming. In fact, it probably was the best looking product in the list from a trading standpoint.

The lubricants were in a satisfactory position, particularly as the season for spring buying is now close at hand. The 15-cent advance in Pennsylvania grade crude is expected to be the forerunner of an increase in the eastern price of bright and steam-refined stocks, and this doubtless will be followed by a similar advance in the Group 3 quotations on these materials.

A weak export market in wax was reflected in the domestic market and the Group 3 price dropped about three-eighths of a cent.

Pennsylvania Producers Discuss Grade Output

(Continued from Page 16)

the P.A.B., was present to give advice. Mr. Shaughnessy said that the producers of all the grade oil districts must be in accord as the board would not participate in partisan fights. In the discussions centering upon a form of supplementary code for the Pennsylvania Grade crude oil region, several of the operators expressed a fear that the only result would be a set of orders concerning wages and hours of labor.

It was pointed out that state regulations covering production would leave the Allegany and West Virginia fields free to expand and take up the slack thus created. It was contended that production in Allegany and Cattaraugus Counties in New York could be nearly doubled within six months, while West Virginia output could be increased considerably. This would leave Pennsylvania in a worse condition and would not benefit southeastern Ohio in the least.

Modernization Urged

Water-flood operators contended that the real answer to the problem of operators elsewhere in the region is modernization. They said that a price differential between Mid-Continent and Pennsylvania Grade crude oils cannot exceed a definite limit without entailing heavy losses in the region's markets. It was pointed out that several major companies are about to come into the region as purchasers of crude oil and finished motor oils, but that any serious threat of curtailed drilling operations or reduced output, will keep them out.

Attending the meeting were the following: J. E. Moorhead, Pennsylvania Grade Crude Oil Association, Oil City; A. E. Booth, Bradford; Ben F. Heck and A. S. Heck, Heck Oil Co., Spencer, W. Va.; Dr. H. J. Walter, Walter Oil Co., Bradford; T. P. Thompson, Jr., president of the Pennsylvania Grade Association, Bradford; W. J. Brundred, Brundred Oil Corp., Oil City; H. A. Hegelheimer, Gordon Oil Co., Columbus, Ohio; C. C. Hogg, National Petroleum Co., Titusville; J. B. Osborn, producer, Titusville; J. B. Taggart, producer, Tidioute; J. C. Martin, Bradford District Producers Association; C. R. McNeal, producer, Sheffield; J. H. Goodman, Philadelphia Oil Co., Pittsburgh.

A. V. Clinger, Clinger Oil & Gas Co., Tidioute; H. J. Eaton, J. P. Eaton Corp., Grand Valley; R. T. Eastell, Washington Oil Co., Pittsburgh; J. B. Wallace, Union Grade Oil Corp., Wheeling, W. Va.; John G. Culinan, Culinan & Co., Sheffield; Albert B. Craig, Chartiers Oil Co., Pittsburgh; T. O. Grisell, Kendall Refining Co., Bradford; A. E. Faine, Ohio Pennsylvania Grade Producers Association, New Straitsville, Ohio; J. M. Shields, Philadelphia Oil Co., Pittsburgh; R. C. Conine, The Oil and Gas Journal, Oil City; Quinn Shaughnessy, Petroleum Administrative Board, Washington, D. C.; Carl Dougherty, West Pennsylvania Producers Association, Butler; W. S. Wolfe, producer, Parkersburg, W. Va., and C. B. Turner, South Penn Oil Co., Pittsburgh.

Mexican Government Cancels Concessions

(Continued from Page 14)

portation of material exclusively for oil purposes. The government has always limited this right to material directly used in the oil industry, but exemption from the export tax has never been taken advantage of by the company.

"The company cannot admit that the contract in question was illegally granted. Every administration since 1906 has recognized its validity. Indeed in 1928 the Mexican government, in accordance with the terms of the petroleum law, confirmed the concession.

"The company believes the government, in a spirit of fair dealing, will not make an attempt to apply this cancellation retroactively, that is to say, will not seek to claim payment of duties upon goods imported under a franchise which it properly enjoyed for years."

Securities Commission Accuses J. Edward Jones

NEW YORK, Feb. 5.—Alleging violation of the Securities Act of 1933, the Securities and Exchange Commission yesterday filed a complaint in Federal Court against J. Edward Jones, dealer in oil royalties. It was alleged in the complaint that Mr. Jones and five other members of his organization made fraudulent omissions and representations in the sale of oil royalties.

The complaint stated that the Jones organization sold to the public in 1934 approximately $1,000,000 worth of oil royalties in the form of trusts. The bill of complaint said that the values placed on these trusts were "wholly arbitrary and unreasonably excessive."

Judge Robert P. Patterson signed an order calling for hearing on Friday to determine whether a temporary injunction shall be granted restraining the Jones organization from further operation.

Mr. Jones issued a statement denying all the allegations of the complaint and said it was an act of retaliation brought about by Secretary of the Interior Ickes. Mr. Jones recently issued a statement calling for resignation of Mr. Ickes as oil administrator.

MARSHALL ON PACIFIC AGENCY

WASHINGTON, D. C., Feb. 4.—As the Pacific Coast Petroleum Agency Agreement provides for the appointment of a nonvoting member of the Board of Governors of the Pacific Coast Petroleum Agency, Administrator Ickes has appointed J. Howard Marshall, and named William S. Scully as an alternate nonvoting member of the Board of Governors.

ROCKY MOUNTAIN RUNS

Estimated daily average production for the week ending February 2 follows:

	Bbls.
WYOMING	
Salt Creek	17,710
Big Muddy	1,730
Badger Basin	40
Black Mountain	80
Byron	200
Dallas Derby	570
Dutton Creek	80
Elk Basin	510
Ferris	10
Frannie	700
Garland	320
Grass Creek	280
Greybull	10
Hamilton Dome	640
Hudson	270
LaBarge	1,090
Lance Creek	660
Lost Soldier	1,960
Mule Creek	210
Midway	50
Notches	0
Oregon Basin	2,400
Osage	740
Pilot Butte	20
Rex Lake	shut in
Rock River	1,490
South Casper	0
Poison Spider	190
Teapot	30
Total Wyoming	31,970
MONTANA	
Buckley-Border	210
Cat Creek	730
Cut Bank	5,170
Dry Creek	0
Kevin-Sunburst	3,600
Lake Basin	40
Pondera	890
Total Montana	10,640
COLORADO	
Florence	160
Fort Collins and Wellington	420
Iles Dome	3,110
Moffat	450
Orchard	70
Rangely	80
Tow Creek	190
Total Colorado	3,480
NEW MEXICO	
Artesia	620
Cooper area	3,210
Eunice area	3,760
Hobbs	33,040
Hogback	210
Hospah	shut in
Jal	3,470
Lea area	1,440
Maljamar	1,930
Rattlesnake	770
Table Mesa	90
Total New Mexico	47,540
Total Rocky Mountain region	93,630

Late Fields

KANSAS

The Imo Oil & Gas Co.'s discovery well in Section 23-22-2w, Harvey County, Kansas, on its 24-hour potential test, averaged 70 bbls. per hour.

Treleaven & Brimm's discovery well in the SW cor. Section 30-18-15w, Barton County, swabbed 28 bbls. per hour on a recent three-hour test. It produced from a pay at 3,601-06 feet.

Atlantic Oil Producing Co.'s discovery well in the C SE NE Section 15-20-33w, Scott County, which produced 572 bbls. in 24 hours, following an acid treatment in Mississippi lime at 4,670-86 feet, was deepened to 4,701 feet without increasing production. The lower formation was very hard. The well will be reacidized.

OKLAHOMA

Carter Oil Co. brought in its eleventh productive well in the Fitts Pool, Pontotoc County, on Monday and it started at 600 bbls. the first hour from Bromide topped at 4,160 feet, total depth 4,280 feet. The well is No. 2 Lucy Brown, NE SE SE Section 25-2-6.

J. R. Higgins and others' No. 15, in the SW NE SW SE Section 25-23-8, Osage County, which was completed some time ago as a 125-bbl. well at 2,039-57 feet, was deepened to 2,072½ feet and was flowing 125 bbls. of oil and 125 bbls. of water. In the same county, Bay Oil Co. and others' No. 1, NW cor. Section 30-22-8, found Siliceous lime at 2,904-52 feet and plugged back to 2,934 feet. It flowed an average of 212 bbls. per day for 10 days.

Stanolind Oil & Gas Co., Texas Co. and others' No. 5 Voss, SE NE SE Section 28-22-2w, Polo Pool, Noble County, got the first Wilcox sand at 4,805-50 feet and flowed 788 bbls. in eight hours. It was drilled to the second Wilcox at 4,852-55 feet, total depth, and the production increased to 366 bbls. in one hour, and 340 bbls. the second hour. The well is a location east of the discovery well completed last fall.

WEST TEXAS

FORT WORTH, Tex., Feb. 5.—Two important locations are proposed for northwest Ector County between Landreth Scharbauer and Davidson-Cummins wildcat producers. One location by Empire Gas & Fuel Co. is assured for the SE cor. Section 10, Block 45, North, T.&O. Survey, and Landreth Production Co. has tentative location in the SW cor. Section 18, Block 44. The latter will be announced as soon as pending deals are closed.

Interstate Conference in Dallas February 15

Governor E. W. Marland of Oklahoma has called a conference of representatives of governors of oil-producing states to meet at the Adolphus Hotel in Dallas, Tex., February 15 to discuss an interstate compact.

The meeting was called at suggestion of Governor James V. Allred, who went before the Texas legislature last week and asked permission to name a delegate. Governor Allred conferred with W. J. Holloway, former Oklahoma governor and representative of Governor Marland.

Invitations will be sent to governors of all oil-producing states, although only Oklahoma, Texas, New Mexico and California legislatures have approved the initial steps.

A representative of William P. Cole, Jr., chairman of the House subcommittee which investigated the oil industry, will be invited.

DR. MORGAN NAMED REGENT

AUSTIN, Tex., Feb. 5.—Dr. George Dillon Morgan, of San Angelo, president of Cardinal Oil Co., and one of the State's best known petroleum geologists, was appointed regent of the University of Texas by Governor Allred, Tuesday, succeeding Charles I. Francis, of Wichita Falls.

Texas Attorney General Obtains Order Restraining Railroads on Shipments

By L. E. BREDBERG

FORT WORTH, Tex., Feb. 5.—Attorney General McCraw has obtained temporary injunction in the Travis County District Court restraining railroads from transporting oil or refined products without an approved tender. Judge W. F. Robertson of the 126th District Court granted the injunction after the attorney general's department had filed application for dismissal of the case in the federal court before Judge Robert J. McMillan and filed an amended petition in the state court. The railroad agents in East Texas had previously received word

HARRY A. MILES

from their headquarters to accept oil and refined products for movement interstate regardless of tenders, but later received countermanding orders.

The State earlier had won a victory in the Third Court of Civil Appeals, which stayed one of the many temporary restraining orders issued by state district judges and ordered Judge C. A. Wheeler to show cause on February 13 why he should not be prohibited from issuing future similar orders without hearings.

Judges Wheeler and J. D. Moore had issued a number of orders prohibiting the Railroad Commission from interfering with movement of products which their owners claimed were on hand prior to December 10, when the commission's products tender order became effective.

Attorney General McCraw contended that Judge Wheeler's restraining order, issued without notice or hearing to the State, allowed the movement of an unlimited amount of untendered oil, and since the hearing was set several days hence—on February 13—all the subject matter of the litigation would have been dissipated. Such a restraining order, he contended, had all the effect of a final judgment in which only one party was heard. This, he contended, was an abuse of discretion on the part of the court.

State Presses for Hearing

Attorney General McCraw late Monday filed in District Judge Moore's court a motion to advance final hearing on a temporary restraining order. Accompanied by a mass of affidavits showing that A. L. Weiss, address unknown, did not own any of the 561,000 bbls. of petroleum products on which Weiss had secured an injunction in Judge Moore's court restraining the Railroad Commission from interfering with its movement. Originally a temporary injunction was secured. When Attorney General McCraw secured stay orders in the Civils Appeals Court on other injunctions, the writ was changed to a temporary restraining order from which the State had no appeal. Mr. McCraw, in his motion to advance the hearing, showed the court had granted temporary writs without hearing or notice to the attorney general's department or the Railroad Commission. In his pleading he said the court had been persuaded through perjury and fraudulent pleas of the applicant for the injunctions.

To Curb Injunctions

Two bills to curb the authority of district courts to issue injunction restraining the Railroad Commission from enforcing its oil conservation orders were offered in the Texas House Monday by Representative H. R. Stovall of Waxahachie.

One of the bills would prohibit issuance of temporary restraining orders or injunctions by a district court until notice had been served on the commission and the State accorded opportunity to answer. No hearing could be held until 10 days of expiration of service.

The bill also would require the plaintiffs to post a bond and also would provide for immediate appeal of district court decisions to the courts of civic appeals where the cases would receive precedence.

The second proposal would vest the State Supreme Court with original jurisdiction to set aside all restraining orders of district judges in which judicial discretion had been arbitrarily exercised or abused.

Necessity for the laws reportedly resulted from the action of the Travis County District Court in granting applications for injunctions.

A special meeting of the House judiciary was held on the bills and they were referred to a subcommittee for report. Authors will seek to pass them through the House under suspension of the rules.

The bills were drafted by the attorney general's department.

New Order Issued

Meanwhile a new order was issued by the Railroad Commission requiring that every person, before selling any by-products of crude oil, shall first get a permit from the Railroad Commission. The December 5 tender order is reissued in full. In addition to the requirement for a permit as a prerequisite to selling oil, it required that every person in the State—excepting filling stations—possessing any oil or products must file a detailed inventory with the commission within 15 days. This inventory must show the amount of oil and products on hand December 10—effective date of the December 5 order—and all transactions involving that oil since that date.

Statewide Hearing Called

The Railroad Commission Monday called a statewide oil proration hearing for February 18 at Austin. All commission orders to prevent waste of crude oil, gas and products will be subject to review.

E. O. Thompson, chairman of the commission, said the notice of hearing was sufficiently broad to permit testimony concerning the order requiring tenders, or permits for movement or marketing of crude or products.

Shipments

There were 374 cars of refined products moved on January 31; of these, 216 went out without tenders (all under injunctions); 31 of the cars left the State and 139 were within the State, 204 going for coastwise shipping. These shipments follow:

Commodity—	No. of cars	Gallons
Gasoline	74	403,686
Fuel oil	169	1,596,253
Topped crude	56	489,000
Casinghead gasoline	36	308,759
Crude oil	14	124,030
Distillate	12	97,260
Kerosene	6	48,800
Residuum	5	40,315
Gas oil	2	16,080
	374	

Two hundred and forty-five cars went out the day before, 102 being untendered; 468 went out January 29, 258 being untendered.

There were 269 cars of refined products shipped from the field on February 1, of which 159 were untendered and under injunctions.

There are now 34 refineries operating in the field. There are at least 12 plants operating on illegal oil, according to reports from the field. Daily average runs to plants were 48,565 bbls. this week.

Cases against a number of East Texas refiners are to be brought to trial on February 19 before Judge William H. Atwell by U. S. District Attorney Clyde O. Eastus. Indictments have been returned against these refiners, several having been arrested for failure to post bond and register their plants as required by the federal Government. Attorney Eastus said more were to be indicted, and that "they were not going to get by as they had in the past."

Oil men dislike seeing Capt. E. N. Stanley leave as chief enforcement officer of the Railroad Commission in the East Texas Field. Harry A. Miles, who has been in charge of the engineering department of the commission at Kilgore, has been named to succeed Stanley.

E. J. Nicklos Resigns From Continental Oil Co.

E. J. Nicklos, vice president, director and manager of the drilling and production department of the Continental Oil Co., has resigned to become an independent operator and consultant in production problems. He will maintain his home and headquarters at Ponca City, where the family has resided since he left the Texas Co. a few years ago to join the Continental Oil Co.

E. J. NICKLOS

Mr. Nicklos has been in the oil business more than 30 years, taking his first job as a lad of 16 at Petrolia, Ontario. He worked in the Canadian fields, then went to Galicia, in Poland, for Bergheim and MacGarvey as production superintendent.

In 1902 he went to Mexico as a subofficial of the Anglo-Mexican Oil Fields, Ltd., and left it in 1910 to become general manager of the Tampico Oil, Ltd. He came home when the revolutionists stopped work, and served as a contractor and then as a divsion manager for the Texas Co.

J. G. Dyer, who has been assistant manager, becomes acting manager of drilling and production, and E. O. Bennett, chief engineer, is to be assistant manager. M. E. Clawson, chief engineer of the manufacturing department, becomes chief engineer of the company.

Employment Provisions in Oil Code Before Industrial Recovery Board

H. H. ANDERSON

H. H. Anderson, of St. Louis, who served as chairman of the labor subcommittee of the Planning and Coordination Committee from May 10, 1934, to January 8, 1935, made the following statement before the National Industrial Recovery Board on behalf of the Planning and Coordination Committee:

My appearance here for the petroleum industry may seem to be irregular in as much as petroleum is one of the five major industries operating somewhat detached from the NRA. The petroleum industry directly engages more than one million workers, perhaps more than any other single integrated industry. It is under the governmental administration of Mr. Secretary Harold L. Ickes and the Petroleum Administrative Board, and is subject to labor policies interpreted by his Petroleum Labor Policy Board, comprising three impartial appointees of the administrator. However, this hearing has a purpose fundamental in character, and its findings probably will determine policies that may serve not only as general guides for the use of the detached code administrations but also as the basis for a Congressional program of code legislation to affect all industries including ours. Hence the oil code authority thanks you for your indulgence and this important opportunity for me to present statistics and the views of many of our employers pertinent to employment provisions in codes.

Let me say at the outset that I did not come here to extol our virtues or to make comparisons with other industries in discussing our code or our performance under it. Perhaps during the last two hectic years we have had the better opportunities and perhaps we have made the poorer use of them. The opportunities offered by an unusually high sustained demand for our products and by a relative freedom from labor disorders have been vitiated not only by the destructive tactics of a few producers and refiners of "hot" crude oil and strategically located secret and open retail price-cutters but also by the legally ham-strung or half-hearted attempts at code enforcement on the part of the government agencies concerned.

Petition for Modifications

The Oil Workers Union of the A. F. of L. petitioned Administrator Ickes last August for certain modifications of the labor provisions of our code, including the establishment of a 30-hour week and simultaneous increases in minimum wage requirements which, in effect, would return to the workers their 1929 weekly earnings, although the working hours would thereby be reduced 42.5 per cent from a 1929 average of 52 hours per week. Certain other benefits were petitioned, including the establishment of 60 cents per hour as a minimum rate for common labor throughout the United States, coupled with the unique provision that this rate should be applicable only to "labor not peculiar to the petroleum industry." This petition was accompanied by a statement containing a number of allegations charging this industry's employers generally with bad faith in the treatment of employes and presenting a broad picture that employers within the industry considered to the false and unjustly derogatory.

In response to this petition, Administrator Ickes ordered a public hearing to start December 3rd before his Labor Policy Board to determine whether or not any of the code's present labor provisions are unjust, inequitable or inconsistent with the purpose of the Recovery Act. During the first week, organized labor presented testimony comprising principally a recitation of miscellaneous local grievances and data, much of which was irrelevant and did not serve even to indicate local non-compliance. During the second week, the employers presented their rebuttal testimony, after contesting the power or authority of the Administrator to alter or amend the provisions of the code except on the initiation of a trade association truly representative of the industry. To bring light to this situation the labor sub-committee of the code authority collected much data concerning the performance of the industry under the code, which should be of extreme interest to your board in the consideration of the problems before you.

The data effectively demonstrate for an industry having favorable advantages as regards sustained demand for its product and excellent pre-depression labor conditions, how the larger units have effectively complied with excessive code labor obligations and reabsorbed their full quota of pre-depression employment, and yet are being pressed by organized labor to hasten its millennium despite the fact that these units were operating at a loss before the Code was promulgated and have been unable to pass to the consuming public the substantial increases in payroll burdens and other costs which code compliance has loaded upon them.

Requirements of Code

I will first recite the present requirements of the petroleum code, after which I will present employment, payroll and earnings data in a form that will serve to answer many of the questions which have been asked on page 2 of your notice of hearing.

With minor exceptions, the petroleum code prescribes weekly working hour limitations as follows:

For non-clerical employes in oil fields, pipe line and refining operations, 36;

For non-clerical employes in marketing operations other than service stations, 40;

For all employes in retail service stations, 48; and

For clerical employes in all operations, 40.

Exceptions listed include executives, supervisors and immediate staff, pumpers on "stripper wells" (i.e., marginal producing operations), a few employes on certain isolated producing properties, and outside salesmen (including tank wagon salesmen owning their own trucks and operating on a commission basis without minimum guarantees).

It may be mentioned that only two industries employing more than 50,000 employes each have working hours of 35 per week and only two industries, employing in total only 5,500 employes, have working hours less than 35 per week.

In oil field, pipe line and refining operations on a 36-hour maximum week, the petroleum code prescribes minimum hourly rates of 52 cents in North and Pacific Coast, 50 cents in Rocky Mountains, 48 cents in Southwest and 45 cents in South. In marketing wholesale operations and for all clerical employes on a 40-hour week, the code prescribes minimum hourly rates of 47 cents in North and Pacific Coast, 45 cents in Rocky Mountains, 42 cents in West North Central States and 40 cents in Southwest and South. In both groups, minimum full-time weekly earnings are about $18.75 in North and Pacific Coast, $18.00 in Rocky Mountains, $18.80 and $16.80 in West North Central states, $17.28 and $16.80 in Southwest and $16.00 in South.

Minimum full-time weekly earnings for service station employes on a 48-hour week are the same as those of the President's Reemployment Agreement for retail employes, i.e., $15.00, $14.50, and $14.00 per week for cities or trade areas above, between and below populations of 500,000 and 250,000, and $12.00 for towns of less than 2,500 population. No exemptions are allowed in these latter small towns, as have been allowed in blanket for all other codes.

As regards the basis for equitable adjustment of wages above the common labor minimum, it may be mentioned that the Petroleum Code is perhaps the only code out of the total of 530 which has a definitely prescribed "pre-depression" yardstick, the adjustment being based on percentages of historical earnings in the extremely abnormal year of 1929, and saddled upon the industry by its administrator through an order of doubtful validity.

The Petroleum Code labor provisions, in addition to prescribing maximum hours and minimum wages, include a provision requiring contract work within the industry to be done at Petroleum Code rates and hours, one prohibiting employment of any person under the age of 16 years, one prohibiting evasion of the code by changing employes to a contractor status, and our old friend Section 7(a).

Employment Data

The employment data above referred to are based on consolidated authentic reports of a group of major integrated oil companies employing in May, 1934, approximately 302,700 persons with a total payroll outlay of approximately $41,000,000 per month. These companies produce approximately 50 per cent of the nation's crude oil, and purchase from innumerable smaller producers in the fields an additional 35 per cent; they operate pipe lines and refineries to transport and refine the combined 85 per cent. They supply about 88 per cent of the gasoline sold in domestic trade, about 26 per cent being delivered in tank-car and cargo lots ex-refinery to jobbers, commission resellers and large commercial consumers, and about 62 per cent being delivered in tank wagons from their own employe-operated bulk plants.

There are approximately 170,000 retail service stations in the United States where petroleum products are the principal items of sale. Of this number, only 20,000 are operated by employes of the subject group of major companies; another 20,000 being operated in smaller chains and as "multi-unit independents", and the other 130,000 being operated by individual dealers. There are also 145,000 to 165,000 retail outlets (not accurately counted since 1929) where the sale of petroleum products is a side-line in conjunction with other principal lines of business, making a total of 315,000 to 335,000 retail outlets of all types.

It is estimated as of May, 1934, that the subject group of major companies employed approximately 47.55 per cent of an estimated total of 153,000 persons engaged in rig-building, drilling and producing field operations, 88.6 per cent of an estimated total of 22,000 persons engaged in pipe line operations, 78.5 per cent of an estimated total of 114,000 persons engaged in refining operations, 61.3 per cent of an estimated total of 148,000 persons engaged in wholesale marketing operations and 9.0 per cent of an estimated total of 431,000 persons engaged in retail service stations where petroleum products are the principal items of sale. The total employment directly in the industry as of May, 1934, is estimated as 868,000 persons plus perhaps an additional 250,000 to 300,000 employed to handle petroleum products in business establishments of other types.

I will now endeavor to answer those questions in your notice of hearing to which our data are pertinent.

Limitation of Hours

1. Q. How has the limitation of hours affected the volume of employment?

A. From May, 1933, to May, 1934, in oil field operations, a 34.4 per cent average reduction in hours from an average of 54.9 to 36, plus some increase in drilling activity, has increased direct employment of wage-earners by these companies 46.4 per cent. Including indirect employment (on their rig-building and drilling operations by contractors), the increase was 77.8 per cent. Other data furnished by small "stripper" (or marginal) well employers in 10 states indicates a direct employment increase of 46.0 per cent in their operations. This showing was made despite a 7.8 per cent reduction in the nation's monthly crude oil production.

In pipe line operations, a 27.1 per cent reduction in hours from an average of 49.4 to 36 has increased employment of wage earners by these companies 23.8 per cent, this despite a 7.8 per cent reduction in the nation's monthly volume of crude oil throughput.

In refining operations, a 13.3 per cent reduction in hours from an average of 41.5 to 36 has increased employment of wage earners by these companies 16.1 per cent.

In marketing operations, a 16.2 per cent reduction in hours from an average of 52.5 to a post-code weighted average of 44.0 (40 in wholesale and 48 in service stations), has increased employment of wage-earners by these companies 23.5 per cent. The increase in service station operations alone was 20.3 per cent.

For all clerical, professional and supervisory employes in all operations, a 6.7 per cent reduction in hours from an average of 42.0 to 39.2 has increased employment in this group 9.0 per cent.

For all classes of workers in these companies, an average of 16.7 per cent reduction in hours from an average of 47.4 to 39.5 increased employment 20.7 per cent.

Reabsorption of Unemployment

The reabsorption of unemployed by these companies is 52,000 direct employes

and 12,000 indirect employes of rig-building and drilling contractors. The estimated reemployment for the entire industry is over 217,200 persons.

Neglecting a group of workers temporarily employed in May, 1929, in extraordinary construction of new operating units, the increases in employment volume under the code have been sufficient to reestablish employment in these companies at levels relative to the "pre-depression" peak year 1929 as follows: oil field wage-earners—99.2 per cent; pipe line wage-earners—103.0 per cent; refining wage-earners—110.8 per cent; marketing wage-earners—118.0 per cent; clerical, professional and supervisory workers in all branches—101.4 per cent; and for the companies as a whole—107.7 per cent. These figures represent averages for all areas in which these integrated major companies operate, they do not necessarily represent individual local conditions.

Unemployment today among rig-building and drilling employes in certain areas exists because of decreased development activity, although for the industry as a whole May, 1934, employment in these branches was practically 100.0 per cent relative to that of May, 1929. Most unemployment existing today in the oil country is the result of the influx of thousands of persons from distressed agricultural and industrial centers during the "depression" who were attracted by the relatively high wages and relatively good conditions current in the petroleum industry.

2. Q. How has the limitation of hours affected the regularization of employment?

A. Limitation of hours perhaps has improved it, although the effort of the industry to prorate crude oil and gasoline production unquestionably has been the more effective cause. Oil industry employment always has been reasonably regular.

Effect on Earnings

3. Q. What effect has the limitation of hours and the simultaneously promulgated code wage requirements had on hourly, weekly and annual earnings of employes.

A. The effect of the Petroleum Code among the aforementioned companies was to increase hourly rates as follows: oil field wage-earners—54.0 per cent; pipe line wage-earners—32.7 per cent; refining wage-earners—17.7 per cent; marketing wage-earners—14.0 per cent; clerical, professional and supervisory workers in all branches—8.4 per cent; and for the companies as a whole—16.7 per cent. It is of interest to note that the hourly rates in the first three groups were brought to 75 cents, 73 cents and 73 cents respectively on a uniform 36-hour week, whereas previously they had been 50 cents, 56 cents and 63 cents on pre-code weeks of 54.9, 49.4 and 41.5 hours respectively.

The effect of the code on weekly earnings was as follows: oil field wage-earners—held level at about $27.60 despite a 34.4 per cent decrease in hours; pipe line wage-earners—decreased 2.9 per cent to $26.90 with 27.1 per cent decrease in hours; refining wage-earners—increased 1.1 per cent to $26.17 despite a 13.3 per cent decrease in hours; marketing workers—decreased 4.5 per cent to $28.53 with a 16.2 per cent decrease in hours; clerical, professional anl supervisory workers in all branches—held level at $40.00 despite a 6.7 per cent decrease in hours; and for the companies as a whole—decreased 2.1 per cent to $30.49 with a 16.7 per cent average decrease in hours. The above figures represent averages in all areas in which these integrated companies operate.

The effect on annual earnings was probably the same as that on weekly earnings, as employment regularity has been changed very little by the code. The actual per capita annual earnings received by all wage-earners in oil field and refinery operations (the only branches covered by statistics of the Bureau of Labor) and in pipe line operations are perhaps higher than those of any comparable industry, and are unusually regular. The Bureau's statistics show that, from September 1, 1933, to November 1, 1934, the average per capita weekly earnings of wage earners in oil field and refinery operations has ranged between the very narrow limits of $25.43 and $28.43 per week.

Cost of Living

4. Q. What has been the relation of changes in hourly, weekly and annual earnings to changes in the cost of living?

A. We consider annual earnings (reasonably represented by weekly earnings in this industry), to be more pertinent than hourly earnings, although we can report general average hourly rates as 66.5 cents in May, 1929, 64.4 cents in May, 1933, and 75.0 cents in May, 1934. Taking the Bureau of Labor statistics' cost of living in June, 1929, as 100.0 per cent, in June, 1933, it was 75.4 per cent and in June, 1934, it was 80.1 per cent. With respect to full-time weekly earnings on an average 52-hour week in May, 1929, taken as 100.0 for the major company employe group as a whole the full-time earnings were 87.4 per cent with an average 47.4-hour week in May, 1933, and 85.9 per cent with an average 39.5-hour week in May, 1934. Present earnings produce indices of "real wages" relative to 1929 of 107.2 per cent, or "real wages" 7.2 per cent higher than those of 1929. This, of course, is a general average, and does not apply in all local operations.

5. Q. How have the limitation of working hours and simultaneously promulgated code minimum wage requirements affected unit cost of production?

A. From May, 1933, to May, 1934, pay rolls in the industry as a whole are estimated to have increased about $230,000,000 per annum, or 17.3 per cent, due to code compliance 217,200 persons. Based on an annual sale of about 17.2 billion gallons of gasoline, the principal source of revenue, the increased direct labor cost of the product delivered to the ultimate consumer has been about 1.33 cents per gallon. Considering that the average net delivered price per gallon to the ultimate consumer has been about 13.6 cents during the year, and that the integrated companies have been forced to sell their product at cost or less than cost, it is estimated that the overall increase in unit cost (including raw materials but excluding state and federal sales tax) has been about 10.9 per cent.

Effect on Consumption

6. Q. What has been the effect of the code wage and hour provisions, as they affect costs, on volume of consumption?

A. The volume of gasoline consumed has increased proportionately to the increased use of motor vehicles as a result of the general pick-up in business in other industries. However, the true answer to the above question is indeterminate. As indicated in Answer 5, direct labor cost per gallon has increased about 10.9 per cent; but, although the industry is not operating at a fair profit, it has been unable to pass the increased cost to the public because of chaotic marketing conditions. The general public has no real conception of true conditions within the industry, and its reaction when prices may be eventually restored to normal cannot be predicted. The situation is further complicated by the fact that gasoline taxes in many instances equal or exceed the wholesale ex-refinery cost of the gasoline. This situation does not exist in any other industry. The public forgets the tax and considers the price it pays as being the amount the industry receives for its products.

7. Q. What effect have the increased costs resulting from code compliance had on corporate earnings in the industry?

A. Until January 1, 1930, the industry as a whole showed satisfactory profits. An analysis of the earnings of those major companies since that date demonstrates that, whatever may have been the case previously, the rate of return on the 4.6 billion dollar net worth is amazingly and distressingly small. Data compiled by Standard Statistics Company relative to the above referred to representative group of major companies show that the rate of return on the combined net worth for the year 1929 was 8.39 per cent profit, whereas in the three succeeding years the rate of return was 2.50 per cent profit, 2.25 per cent deficit and 0.36 per cent profit, respectively. For the year 1933 the average rate of return was 0.87 per cent profit. For the first six months of 1933, all prior to the promulgation of the code, the rate of return was 2.00 per cent deficit; however, for the second six months, of which four followed the date of promulgation of the code, the rate of return was 2.87 per cent profit. For the first half of 1934 the rate of return fell off again to 1.13 per cent profit; and it is likely that the last half of 1934 will show substantial losses because the average retail selling price per gallon fell off from an average of 13.9 cents for the first half of 1934 to 13.3 cents for the last half of 1934. On November 1, 1934, it was 11.72 cents. This change in profit condition is principally due to the rapid migration of gallonage from the company-operated service stations to the open and secret cut-price stations operated by many independent dealers, track-siders and farm cooperatives, whose fear of threatened price-fixing or code enforcement during the first few months of the code held them in check.

Price-Cutting Tactics

It has been estimated that their price-cutting tactics have increased their percentage of the total volume of sales from 55 per cent of the total business to 20 per cent of the total business in metropolitan and agricultural areas, with corresponding relative losses in per cent of total business by the code-abiding companies. Such activities sharply decrease the sales revenues of the code-abiding companies, which (latter) carry the brunt of all efforts to increase required minimum earnings to employes. For the first half of 1935 these code-abiding companies have only the harsh alternative of further reducing their posted prices to compete with these code violators or of losing their essential gallonage, and a continuation of present operating losses appears inevitable.

During the past year a number of old established smaller units have been thrown into receivership, and others have abandoned their refining and marketing operations in an attempt to salvage their investments by concentrating on production of crude oil, the price of which has been maintained by control of the volume of crude oil produced.

An important factor in this situation is the relative position of petroleum products index prices. With respect to the 1926 average index price, the July, 1934, index price for petroleum products was 51 per cent whereas the general index price for all commodities was 75 per cent, and the petroleum products index price during the last six months has substantially further decreased whereas there has been a sustained improvement in the average price index of all commodities.

8. Q. Should the maximum working week in codes be reduced, maintained or increased?

A. We would hesitate to recommend any increase in code hours generally because of the probable social consequences. With respect to the other two possibilities we can speak for our code only. The statistics presented in Answer 1 show that this industry has reestablished employment of those regularly attached to it at levels 7.7 per cent above the abnormal year 1929. Clearly this performance does not justify a further decrease in the working hours of our code. Even in service station operations, where a work week of 48 hours is permitted, employment is at a level 18 per cent above 1929.

Working Week

9. Q. Should the working week and minimum wage requirements in codes be changed by groups of industries or separately by individual industries?

A. We believe that existing disparities in maximum hour and minimum wage requirements between the larger related national-scale industries should be reduced. Either those who now have relatively high obligations should be given relief or they should be excepted if further obligations are imposed generally. This industry has served as a magnet for unemployed who have drifted to its centers from other industries, attracted by its relatively high requirements and performance. This condition is disruptive also to industrial peace in those other industries. It would not seem necessary to invite attention to the fact that an unskilled laborer, without training or experience, who finds that one industry pays such labor more than his own industry will perhaps first try to obtain employment in that industry and then, having found that it has absorbed its capacity, will be stirred to action by what appears to him to be an unreasonable disparity prejudicial to other employment. The disparity has acted as a boomerang instead of a benefit to those 1929 employes of the industry who have been displaced by such newcomers as have been fortunate to receive employment.

10. Q. Is the degree of flexibility in hours provided by such provisions as overtime, peak periods, averaging, etc., inadequate, adequate or excessive?

A. In our code they are unwarrantedly restrictive. For example: (a) No latitude of any kind for averaging hours is provided in either wholesale marketing or service station operations. The well-known seasonable fluctuations in consumption, and emergencies imposed upon our day-to-day delivery system, demand a sensible flexibility not now allowed. (b) Clerical workers can work 48 hours in any one week but not more than 80 in any two weeks. This at best creates a 48-hour—32-hour cycle. Our accounting practices require the privilege of working the clerical force not more than 48 hours in any one week but with the averaging extended to the calendar month, a provision enjoyed by many other industries. (c) Oil field, pipe line and refinery shift-workers are limited to 16 hours in any two days, 72 hours in any two weeks, and 40 hours in any one week. These restrictions have made proper distribution of shift work extremely difficult. Overtime is permitted only in emergencies involving breakdowns or protection of life and property.

Unproductive Burdens

All codes were aimed to promote industrial recovery, and to increase employment by sensible limitation of the average work week. When the labor group advocates imposition of an unreasonably rigid daily and weekly limit on working hours by code fiat, it is merely loading additional unproductive burdens on a distressed industrial structure. Reasonable flexibility of averaging hours is most important, and here, again, those codes having unreasonably strict limitations should be liberalized.

11. Q. Do the present provisions work as well as any other methods that can be devised?

A. Those of our code will work satisfactorily if the averaging is liberalized. Much technical non-compliance will be eliminated, and more respect for the code as a reasonable regulation will result.

12. Q. What standards should be followed in establishing minimum wages?

A. We favor adherence to historical "going" local or area rate relationships, with a leveling out of requirements between all industries operating in each area. Hourly rates should be such that minimum full-time earnings will bear a reasonable parity historically to the cost of living, i.e., minimum "real wages" should be mantained on a parity in all industries if economically practicable, and within the reasonable ability of the industry to pay.

13. Q. Are present minimum wages satisfactory from the point of view of such standards?

A. Present petroleum industry code minimum requirements, and average wages actually paid, more than meet the above standards.

14. Q. What has been the effect of differentials such as those based on sex, location or population?

A. No differentials are permitted with

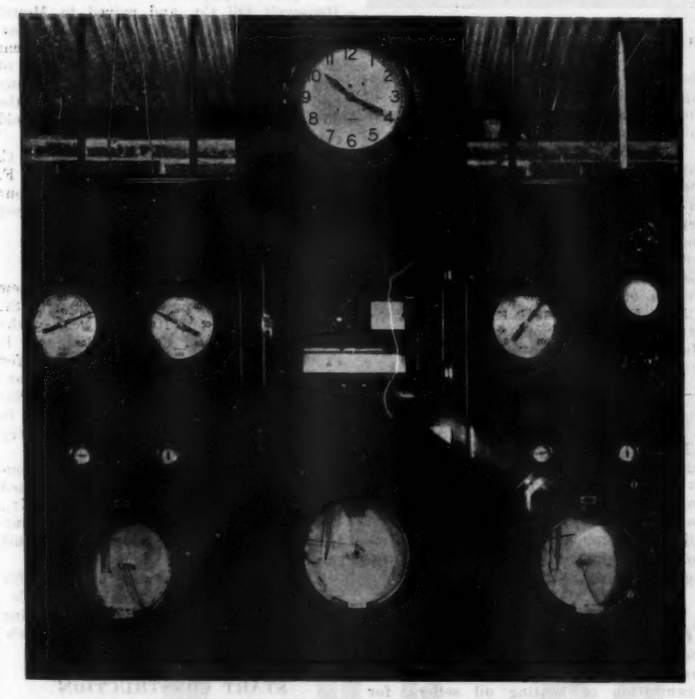
(Continued on Page 41)

Mid-Continent Adds 3,600 Barrel Pressed Distillate Rerun Unit

By W. T. ZIEGENHAIN

The Mid-Continent Petroleum Corp. has just placed in full operation a new 3,600-bbl. Foster Wheeler pressed distillate atmospheric rerun unit at its West Tulsa refinery. Its simple design, and ease of control was indicated in a statement made by B. F. Koontz, vice president of the Mid-Continent corporation, when he said, "You can take that unit to Muskogee or any other place and if you will just permit me to hold the one control key, I could operate it alone from my office." Its compactness is emphasized by the fact that it takes up only one-tenth of the space occupied by the 20 shell stills whose work it is now doing. The essential parts of the unit include a standard heater, an 80-foot bubble tower, and a normal quota of exchangers. One of the features of the plant is its system of automatic control.

General view of Mid-Continent Petroleum Corp.'s new 3,600-bbl. pressed distillate rerun unit



Control of the unit is centered in this group of instruments

Operation of Unit

In operating the unit the charge is continuously withdrawn from storage as an 80 viscosity, 29.5 gravity pressed distillate. The chief function of the new equipment is to effectively refractionate the pressed distillate to make a clean separation among the three grades of raw neutrals, namely the 110, 220 and 330 viscosity stocks.

The incoming charge first passes through a series of four liquid to liquid exchangers, these being conveniently grouped on short foundations which permit men to work on the ground should it become necessary to change tubes or alter connections in any manner. The unit was designed to permit taking off liquid side streams of gas oil, 110 viscosity and 220 viscosity raw neutral stocks from the tower. This in turn, was made possible by the use of internal stripping sections utilizing superheated steam as the source of energy. The process is made extremely flexible by the use of Foster Wheeler reflux control valves which operate between the stripping sections of the tower and permit adjustment of the rate of reflux as the need arises. These valves maintain constant specifications on the products regardless of the rate of throughput.

Pipe Still Load

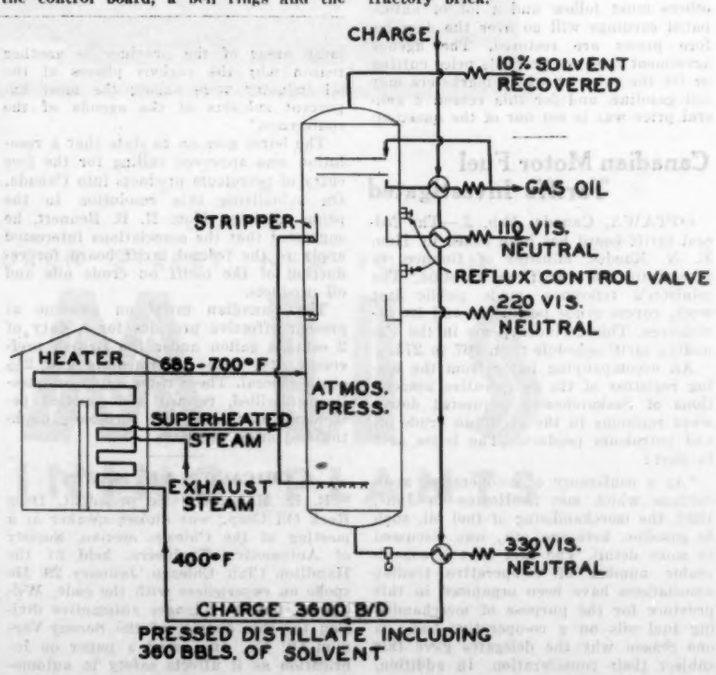
As the oil comes to the pipe still its temperature approximates 400° F. The pressed distillate passes up through the heater tubes in conventional manner, 80 per cent of the work being done by radiation. The oil leaves the heater at a temperature of between 685° and 700° F. It enters the fractionating tower at a point about one-third up from the base. Approximately 20 pounds of steam are used for stripping and pumping for each barrel of oil charged. The energy supplied to the system in the form of steam and direct heat within the furnace calls for a fuel consumption equivalent to between 1.9 and 2 per cent of the volume of the charge.

Centralized Control

Control of the unit has been centralized in a panel board previously mentioned and the various control points are so correlated as to permit turning but one key. This simultaneously adjusts the fuel supply to the furnace, the reflux over the tower and the quantity of side cuts removed to the new rate of charge. Should the charging pump fail to operate at some time, or for some other reason the normal supply of oil does not reach the furnace, a red light flashes on the control board, a bell rings and the fuel supply to the furnace is automatically cut off. Similar warnings are given in the pump house and in front of the furnace.

Principal Equipment

While the design and construction of the unit fell to the Foster Wheeler Corp., in co-operation with the engineers of the Mid-Continent Petroleum Corp., their choice of some of the major pieces of equipment included Foxboro pressure gauges and flow controller, Taylor tower and furnace controls, Crane pipe and fittings, Timken tubes, Webster burners, Worthington pumps, Key boilers, Detrich furnace arch, and Harbinson-Walker refractory brick.



Simplified flow chart showing method of operation

NEWS FOR PETROLEUM REFINERS

Important Developments Expected in California

LOS ANGELES, Calif., Feb. 4.—The next three months are destined to be an important period in California because of recent developments in the marketing situation and equally important occurrences in drilling and production operations. Marketing conditions at present are not especially critical, but are sufficiently unstable to command the immediate attention of the governors of the Pacific Coast Petroleum Agency. Conditions have grown less favorable the past week due to cut-rate prices, and while members of the agency are hopeful of averting a general price recession, some are not quite as sanguine. It had been hoped that the industry might be able to get through the spring months of 1935 without experiencing the regular annual price war, but this is not assured.

Conditions were brought to a head this week by the price-cutting activities of one refiner operating on illegally produced crude oil. The refiner in question is not a member of the Pacific Coast Petroleum Agency and consequently is not amenable to its provisions. The agency cannot purchase the output of this chiseler as long as he is using hot oil, although it would be to the mutual advantage of all concerned if this gasoline could be purchased by the pool. If this refiner can be induced to conform with curtailment, directors of the agency would probably be willing to make a satisfactory deal in order to stabilize the market notwithstanding their reluctancy to establish any such precedent.

There has been some discussion regarding the advisability of instituting court action to force compliance with the petroleum code but nothing has been done up to the present. It is likely, however, disciplinary action will be undertaken in the near future. In the meantime, other marketers threaten to meet the competitive price unless something is done to correct the situation. This has prompted the agency to submit the matter to its directors for immediate consideration because if one of its members cuts the price others must follow and a lot of anticipated earnings will go over the dam before prices are restored. The agency agreement does not preclude price cutting or fix the price at which marketers may sell gasoline, and for this reason a general price war is not out of the question.

Canadian Motor Fuel Tariffs Investigated

OTTAWA, Canada, Feb. 2.—The federal tariff board has been asked by Hon. E. N. Rhodes, minister of finance, to investigate the tariff on gasoline. The minister's reference, made public last week, covers crude petroleum and its derivatives. This includes items in the Canadian tariff schedule from 267 to 275.

An accompanying letter from the acting registrar of the co-operative associations of Saskatchewan requested downward revisions in the tariff on crude oil and petroleum products. The letter said in part:

"At a conference of co-operative associations which met in Regina in June, 1934, the merchandising of fuel oil, such as gasoline, kerosene, etc., was discussed in some detail. The fact that a considerable number of co-operative trading associations have been organized in this province for the purpose of merchandising fuel oils on a co-operative basis is one reason why the delegates gave this subject their consideration. In addition, the prevalence of tractor farming over large areas of the province is another reason why the various phases of the oil industry were among the most important subjects of the agenda of the conference."

The letter goes on to state that a resolution was approved calling for the free entry of petroleum products into Canada. On submitting this resolution to the prime minister, Hon. R. B. Bennett, he suggested that the associations interested apply to the federal tariff board for reduction of the tariff on crude oils and oil products.

The Canadian tariff on gasoline at present effective provides for a duty of 2 cents a gallon under the British preference, 2¼ cents intermediate and 2½ cents general. These rates apply on gasoline; distilled, refined and purified petroleum; oils, coal and kerosene; naphtha and other products.

Standard New Jersey Enters Order for 200 Streamlined Tank Trucks

New type of tank truck to be placed in use by Standard Oil Co. (N. J.)

Deliveries are now being made on orders of the marketing subsidiaries of the Standard Oil Co. (New Jersey) covering 200 new streamlined and semi-streamlined motor trucks. The subsidiaries are spending over $2,000,000 in new transportation equipment which includes cars and other motor vehicles in addition to the motor trucks.

The 200 motor trucks all of which will be delivered by March will replace obsolete equipment which will be taken out of service. In line with the trend in pleasure cars, the streamlined effect has been obtained in the new trucks. They were designed by the Standard's motor vehicle department of which J. F. Winchester is manager. The trucks are being built by two manufacturers. One of the new streamlined units is shown in the accompanying photograph.

The motor vehicle department points out that present marketing conditions call for larger and faster product deliveries as well as requiring facilities for conveying a greater variety of products in one delivery to stations and dealers. The largest motor truck in the new fleet carries 2,300 gallons of motor fuel and 150 gallons of motor oil in 10-gallon cans. All the new units have from 5 to 7 compartments for various oil commodities. Many new safety features have been incorporated in the design of the trucks.

CHICAGO S.A.E. MEETS

B. L. Majewski, vice president, Deep Rock Oil Corp., was dinner speaker at a meeting of the Chicago section, Society of Automotive Engineers, held at the Hamilton Club, Chicago, January 29. He spoke on experiences with the code. William J. Gerwe, manager automotive division for this district of the Socony-Vacuum Oil Co., Inc., read a paper on lubrication as it affects safety in automobiles.

OPPOSE GASOLINE TAX

EDMONTON, Alberta, Feb. 2.—The Edmonton council of the United Commercial Travelers has passed a resolution protesting against the 1-cent extra gasoline tax imposed by the province, and will get in touch with similar organizations throughout Alberta to join in urging its removal.

BURNER OIL MEN ELECT

CHICAGO, Feb. 4.—Newly elected officers of the Burning Oil Distributors Association of Chicago, the local retail organization of heating oil sellers, for 1935 are as follows: F. E. Spencer, Spencer Petroleum Co., president; J. Loeffler, Commerce Petroleum Co., vice president; R. E. Curran, Suburban Oil Co., Forest Park, Ill., treasurer; F. B. Caldwell, secretary.

DEFINES EMPLOYE

The term "employe" which the Petroleum Labor Policy Board has been attempting to define for several months will probably be officially defined within a week or two. It has been learned that it will embody practically the same provisions as set forth by the board when the definition was first proposed.

This definition has been severely criticised as being illegal by numerous oil company lawyers and executives, but its principles are still upheld by the L.P.B.

Roosevelt Oil Appeals Central Case Decision

MUSKEGON, Mich., Feb. 4.—Roosevelt Refining Co., of Mount Pleasant, Mich., will appeal a recent decision of Circuit Judge John Vanderwerp, of Muskegon, setting aside the company's purchase of assets of the former Michigan Central Refinery, of Muskegon, in 1930 and providing an accounting of all company dealings since that time.

The decision was handed down in a suit brought against the Roosevelt refinery by the Swastika Oil & Gas Co., of Muskegon; Guy I. Warren and Harry C. Kinne, of Chicago, who claim an interest in the Mount Pleasant plant through an agreement with the predecessor company.

Under a contract with J. D. Wrather, the Swastika company was to furnish 2,000 bbls. of crude daily and Mr. Wrather was to build a refinery at Muskegon. Mr. Wrather was to be paid $75,000 out of the profits of the Michigan Central refinery after which he was to assign 35 per cent of the refinery stock to the Swastika company.

The rapid decline in Muskegon Field production resulted in discontinuance of refinery operations before Mr. Wrather had been paid in full. Shortly afterward the plant equipment was sold to the Roosevelt Oil Co. and moved to Mount Pleasant where new fields were increasing in production. Claiming the present Roosevelt Oil Co. was an outgrowth of the Michigan Central, Swastika company and officials brought suit to obtain the 35 per cent interest specified in the old contract.

The Roosevelt company, headed by C. L. Maguire, president, and Thomas F. Caldwell, secretary, during the past four years has developed one of the largest independent plants in Michigan.

NEW MICHIGAN REFINERY

The McClanahan Refining Co.'s new 1,500-bbl. plant now being erected in St. Louis, Mich., about 10 miles west of the big Porter Pool of Central Michigan, is expected to be completed and ready for operation about February 15, it was announced by E. G. Guy, former superintendent of the Old Dutch refinery in Muskegon and of the Roosevelt refinery in Mount Pleasant.

Mr. Guy has been in charge of construction. D. E. Foster, now connected with a refinery in Bowling Green, Ky., will be superintendent of the new plant. He was expected to arrive in St. Louis this week.

The refinery will provide an outlet for production of the McClanahan Oil Co., headed by W. L. McClanahan, leading independent producer in Central Michigan.

START CONSTRUCTION

MUSKEGON, Mich., Feb. 4.—Contracts aggregating about $75,000 for equipment comprising major parts of the new Universal Oil Products Dubbs cracking unit to be installed by the Naph-Sol Refining Co., of North Muskegon, have been let and work of preparing the site for laying foundations will start Monday, it was announced Saturday by Walter E. Anderson, president of the local independent refinery.

CALGARY REFINERY FIRE

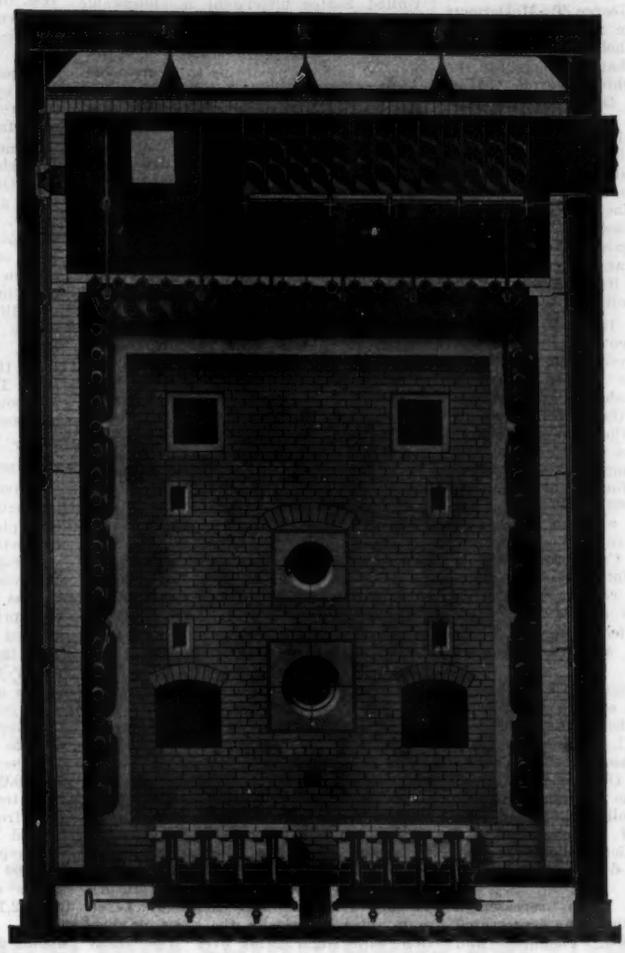
CALGARY, Alberta, Feb. 2.—Fire at the plant of the Lion Refinery Co. here recently caused approximately $4,000 damage to the boiler room and warehouse. The use of chemicals prevented the fire spreading to oil in storage. Rebuilding will be undertaken at once.

UNIFORM ABSORPTION OF HEAT

IN THE

LUMMUS

OIL HEATER



Note the design of the Lummus Oil Heater as shown in the cross-section illustration:

On the side walls where heat absorption is entirely by radiation, there is a single row of tubes spaced on centres twice the diameter of the tube. The roof tubes, which are in the path of the gasses are in a double row. In this manner, all the radiant surface is made most effective — with no overheating.

In the 1934-1935 edition of the Composite Catalog of Oil Refinery Equipment you will find a complete, 12-page description of the Lummus Oil Heater. Additional copies of this description, in the form of a technical bulletin, are available.

THE LUMMUS COMPANY • 50 CHURCH STREET, NEW YORK, N. Y.

LUMMUS

PETROLEUM REFINING PLANTS

NATURAL GASOLINE MANUFACTURE

Important Court Ruling Favors Victor Gasoline

The regular grade or what is now known as 63-70 octane gasoline has been ruled to be comparable to the old 58-60 U. S. Motor gasoline for contractual purposes. This was the decision rendered by Circuit Judge George T. McDermott of Topeka, Kan., in the case of Victor Gasoline Co. vs. Shell Petroleum Corp. The opinion held that contracts for the sale of gasoline which provide that a price as quoted in trade journals shall govern, and the price quotation is changed, a court will substitute another quotation representing substantially the same gasoline as that covered by the quotation named in the contract.

Applying this principle the court held that the Victor Gasoline Co. was entitled to recover against the Shell $91,128.61 with two years' interest amounting to $11,638 on its contract for the sale of natural gasoline.

The contract for the sale of natural gasoline had been entered into in 1928 and the suit involved some 18,000,000 gallons of gasoline delivered between February and November, 1932. The contract provided that the Victor should receive not less than the price of 58-60 U. S. Motor gasoline as quoted in the Chicago Journal of Commerce. In October, 1931, the Chicago Journal of Commerce ceased to quote 58-60 U. S. Motor and quoted U. S. Motor with an octane rating. The Shell contended that since the Chicago Journal of Commerce ceased to quote 58-60 U. S. Motor gasoline, it was liable only for the reasonable value of the natural gasoline delivered and that instead of being indebted to the Victor it was entitled to a refund of some $58,000.

The court held, however, that 58-60 U. S. Motor gasoline was the standard or regular gasoline marketed and sold under the name of 58-60 U. S. Motor in 1928, and that though gasoline specifications were changed, after October 1, 1931, U. S. Motor 57-64 octane was then the regular or standard gasoline, and that even though the forms of the quotation had been changed the Victor should recover the price of the 57-64 octane grade of gasoline.

Philip Kates, of Tulsa, represented the Victor, and the Shell was represented by Thompson, Mitchell, Thompson and Young, and Cyrus Gentry and Richard Shewmaker, of St. Louis.

Texas Becomes Leading State in Natural Gasoline Output as Gains Continue

Natural gasoline production in the United States underwent a noticeable increase during 1934. Total production for the first 11 months reached 1,385,200,000 gallons, according to figures compiled by the United States Bureau of Mines. This upturn in production represents a gain of 8 per cent over the corresponding period in 1933 and an average daily gain of 300,000 gallons.

The total trend in output of natural gasoline is not reflected throughout the United States, however. Of the 21 geographical subdivisions, more than one-third show declines in yearly production. These declines occurred generally in the older fields where the supply of gas is one the wane.

The State of Texas continued to show the greatest increase in output. The increase was due mainly to activity in the Panhandle area exceeding the total California production in November to become the leading state. This largest gas field in the world made a gain of 44 per cent for the 11 months which represents a tremendous addition to the supply. Although no control of gas production in this field is immediately evident, the high degree of activity seems to show that operators expect curtailment sooner or later and are taking advantage of the open supply now available. East Texas, although of much lesser magnitude, made the greatest increase of any district in the United States. During the past 11 months 42,000,000 gallons of natural gasoline were manufactured in this field, more than doubling the amount made in 1933. A new plant is now under construction in this field which will have a capacity of 30,000 gallons daily. This plant being built by the Sabine Valley Gasoline Company is expected to be in operation by May 1, further adding to the output of that field. These two fields, the Panhandle and East Texas reveal with few exceptions, consistent gains from month to month. This adds credence to any predictions as to their future output. The remaining fields of Texas maintained practically the same production with slight gains over the 1933 totals.

Within California a marked change in natural gasoline manufacture is in progress. Gains reported in Huntington Beach, Kettleman Hills and Ventura Avenue are practically cancelled by declines in the other California fields. These regional changes are not now so pronounced as they were in 1933. Most of the districts are reporting sustained schedules of manufacture.

Somewhat the same conditions prevail in Oklahoma as are seen in California. The Oklahoma City and Osage areas show gains of 13 and 8 per cent respectively, while Seminole and the rest of the state report decreases to bring the total state production to 99 per cent of that in the 11 monhs of 1933. The transition in the Oklahoma City pool from gas lift to pumping will tend to increase the output of natural gasoline there. The Osage Field reveals in its gain, the development in the new deeper sand. This area will never become a major source, but will continue to show increases for some time.

The increased consumption of natural gasoline in the past few months seems to have completely absorbed the added production. Stocks at the natural gasoline plants which had assumed record proportions in many districts began decreasing in July and have continued downward to the year's low of 37,400,000 gallons on November 30. This reversal is one principal justification for the increased production of natural gasoline. That the market is in a much better condition is revealed in a comparison of stocks on November 30, 1934, with those of a year before. The figures quoted by the Bureau of Mines are not comparable due to a change in bases effected in the December, 1933, report. At that time 10,200,000 gallons were transferred from bulk terminal stocks and 3,900,000 gallons from refinery stocks to the group headed Total Stocks in the natural gasoline report. Allowing approximately 14,000,000 gallons for change in basis, the stocks at the end of November, 1934, were 2,186,000 gallons less than the year before, although the production for the month was greater by 11,800,000 gallons. Both figures reveal a greatly strengthened market.

Half Million Dollars to Be Spent on Sabine Plant

Ground was broken this week for the construction of a 30,000-gallon natural gasoline plant on the Mary Scott Survey of Gregg County, in the East Texas Field. The plant will operate under the name of the Sabine Valley Gasoline Co. and control of the company is in the hands of H. R. Dickerson, of Shreveport. Mr. Dickerson is well known in the Mid-Continent oil fraternity, having been vice president of the Arkansas Natural Gas Co. until a short time ago.

The new plant will cost approximately $550,000 and is expected to be ready for operation by May 1. All equipment has been purchased and includes eleven 230-horsepower Cooper-Bessemer compressors.

The gas will be brought to the plant from approximately 900 wells, a sufficient supply having already been contracted for to permit a daily average throughput of 14,000,000 feet daily. The gathering system will necessitate the laying of approximately 90 miles of pipe line ranging in size from 20-inch to 2-inch.

These lines will tap a relatively large area and will supply an outlet for gas that heretofore has not had an adequate market. The location of the plant has been chosen as 5 miles north and a little west of Kilgore. The principle of gas rectification will be employed in operation of the plant and provisions have been made for the return of the gas to the wells for repressuring as soon as artificial means of production need to be used.

While the construction of the plant will be under the direct supervision of H. R. Dickerson, the Petroleum Engineering Co., an associate of the Arthur G. McKee Co. has supplied the plant layout and the engineering work.

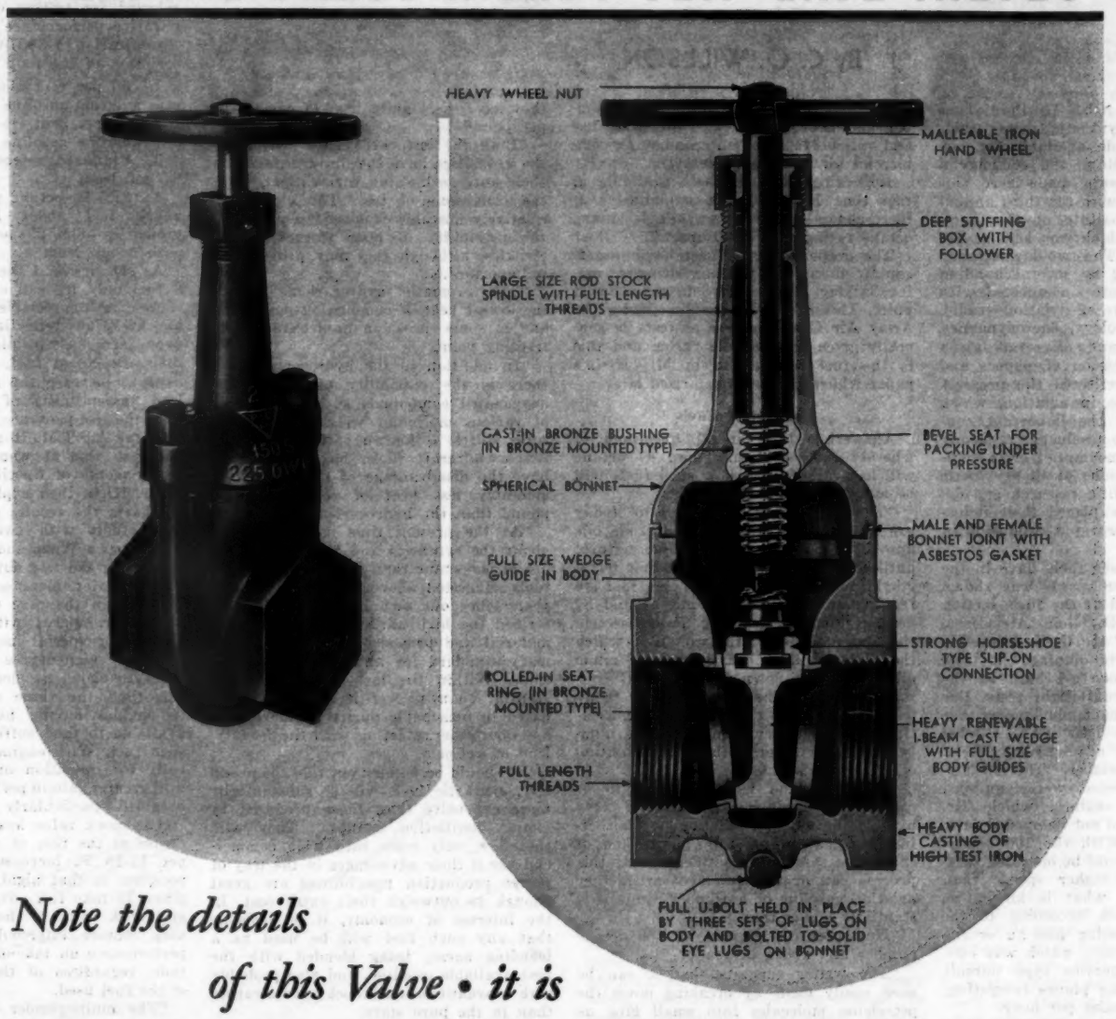
Upon completion of this plant, the East Texas Field will have a total natural gasoline plant capacity of close to 200,000 gallons per day and will be able to process approximately 120,000,000 feet per day. Most of the gas processed at the present time contains about 3 gallons per 1,000 feet processed but as the field resorts to artificial means for producing the oil, the gasoline content of the gas may be expected to increase.

TREND OF PRODUCTION OF NATURAL GASOLINE IN THE UNITED STATES BY DISTRICTS DURING TWO ELEVEN-MONTH PERIODS ENDING NOVEMBER 30, 1934

(Millions of gallons)

	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Total 11 months ending Nov. 30, 1934	Total 11 months ending Nov. 30, 1933	Per cent 1934 production was of 1933
Appalachian	5.8	5.9	6.2	6.0	4.9	4.0	3.0	2.7	2.9	3.1	4.4	5.3	48.4	53.4	91
Illinois, Kentucky and Indiana	.8	.8	.8	.8	.6	.5	.5	.5	.6	.6	.7	.8	7.2	7.3	99
Oklahoma	31.5	31.4	28.9	31.5	30.5	28.7	27.6	28 1	28.3	28.5	31.5	31.3	326.3	328.2	99
Oklahoma City	9.6	9.0	8.6	9.3	9.5	8.2	7.5	7.7	7.5	8.0	9.0	9.6	93.9	82.9	113
Osage County	3.3	3.7	3.5	3.8	3.4	3.5	3.2	3.4	3.9	4.0	4.4	4 2	41.0	38.0	108
Seminole	7.7	7.7	6.8	7.6	7.2	6.7	7.3	7.0	7.0	6.3	7.3	6.9	77.8	89.3	87
Rest of State	10.9	11.0	10.0	10 8	10.4	10.3	9.6	10.0	9.9	10.2	10.8	10.6	113.6	118.0	96
Kansas	2.1	2.4	2.3	2.3	2.2	2 2	1.9	1.8	2.1	2.3	2.3	2.7	24.4	20.8	117
Texas	34.4	35.2	33.0	36.2	35.8	37.0	36.6	38.1	40.1	41.5	43 0	43.5	420.1	325.0	129
East Texas	2.1	2.3	2.5	2.5	2.6	3.2	4.0	4.9	5.1	4.9	5.0	4.9	42 0	17.9	234
North Texas	1.9	1.9	1.7	1.9	1.8	1.7	1.4	1 6	1.5	1.5	1.7	1.8	18.7	18.3	102
Panhandle	18.5	19.1	17.9	20.5	20 0	20.0	19 4	19.2	21.4	23.5	24.6	25.5	231.1	160.4	144
West Central	7.6	7.7	6.9	7.5	7.4	7.3	6.7	7.1	6.8	6.6	6.7	6 7	77.4	77.3	100
Rest of State	4.3	4.2	4.0	3.9	4.0	4.7	4.9	5.3	5.3	5.0	5.0	4.6	50 9	51.1	100
Louisiana	3.3	3.5	3.5	3.5	3.5	3.2	3.3	3 1	3.2	3.4	3.7	3.9	37.8	34.8	109
Arkansas	1.2	1.1	1.0	1.1	1.1	1.1	1.0	1.1	1.1	1.1	1.1	1.0	11.3	13.8	85
Rocky Mountain	4.7	4.7	4.6	4.8	4 9	4.7	4.6	4.7	4.9	4.8	5.5	5 1	53.3	51.5	103
California	43.4	43.0	37.1	40.6	39.4	40.7	40.7	43.6	44.1	42.6	43.8	41.3	455.9	450.6	101
Huntington Beach	3.0	2.9	2.7	3.1	3.0	3.3	3.4	3 7	3.6	3.4	3.4	3.2	35.7	22.6	158
Kettleman Hills	12.6	12.6	11.6	11.5	11.1	10.9	11 0	12.5	13.9	14.5	15.2	13.3	139.1	119.8	116
Long Beach	5.9	5.8	5.4	6.4	6.4	6.7	6.8	6.5	6.5	6.2	6.2	6 0	69.3	76.0	91
Santa Fe Springs	5.6	5.5	4.8	5.3	5.1	5.5	5.2	5.4	5.3	4.8	4.8	4.7	56 3	75.1	75
Ventura Avenue	3.6	3.8	3.4	4.0	3.4	3.6	3.5	3 7	3.5	3.3	3.6	3.9	39.7	35.3	112
Rest of State	10.7	10.4	9.2	10.3	10.4	10.7	10.8	11.4	11.4	10.4	10.6	10.3	115 8	121.8	95
Total	126.2	127.0	117.4	126.8	122.9	122.1	119.2	123.7	127.3	127.9	136.0	134.9	1,385 2	1,285.4	108
Daily average	4.07	4.10	4.19	4.09	4.10	3.94	3.97	3.99	4.11	4.26	4.39	4.50	4.15	3.85	...
Stocks at end of period	41.7	41.7	41 1	42.9	53.6	62.7	69.1	66.8	56.7	56.5	45.5	37.4	.....	.....	...

READING-PRATT & CADY CLIP GATE VALVES


HEAVY WHEEL NUT
MALLEABLE IRON HAND WHEEL
DEEP STUFFING BOX WITH FOLLOWER
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CAST-IN BRONZE BUSHING (IN BRONZE MOUNTED TYPE)
BEVEL SEAT FOR PACKING UNDER PRESSURE
SPHERICAL BONNET
MALE AND FEMALE BONNET JOINT WITH ASBESTOS GASKET
FULL SIZE WEDGE GUIDE IN BODY
STRONG HORSESHOE TYPE SLIP-ON CONNECTION
ROLLED-IN SEAT RING (IN BRONZE MOUNTED TYPE)
HEAVY RENEWABLE I-BEAM CAST WEDGE WITH FULL SIZE BODY GUIDES
FULL LENGTH THREADS
HEAVY BODY CASTING OF HIGH TEST IRON
FULL U-BOLT HELD IN PLACE BY THREE SETS OF LUGS ON BODY AND BOLTED TO SOLID EYE LUGS ON BONNET

Note the details of this Valve • it is

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Like all Reading-Pratt & Cady Valves, R P & C Clip Gate Valves have the stuff in them! The valve illustrated is an iron body clip gate valve with features specially built into it to assure rugged sturdiness and the ability to withstand continuous service.

The round bonnet construction permits the use of an asbestos packed male and female joint, which assures tightness. The use of a U-Bolt in contrast with the use of single bolts permits equalization of pressure in tightening. The I-Beam cast wedge puts sturdiness right in the heart of the valve. Full size body guides assure correct seating. These are only a few of the features. Check the illustration above and study each one —there is a very definite reason for each.

R P & C Clip Gate Valves are made in two styles—all iron and bronze mounted, all parts are interchangeable and the valve can be packed under pressure.

If you are not familiar with Reading-Pratt & Cady Valves write us regarding your requirements and we'll be pleased to send you ample valve information.

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Synthetic Motor Fuel of 100 Octane Number to Be Available for Aviation

By C. O. WILLSON

NEW YORK, Feb. 1.—Predictions that 100 octane synthetic motor fuels will shortly be made available for airplanes used in military and commercial transport service were made here this week in connection with the third annual meeting of the Institute of the Aeronautical Sciences which was held at Columbia University. The two-day meeting, which was attended by several hundred scientists and operators connected with the various divisions of aviation—radio, metallurgy, meteorology, aerodynamics, engineering, fuels and oils—was given over to the presentation of papers and discussions which reflected the progress that has been made in aviation, which has become one of the important consumers of petroleum products. A steady increase in this consumption was indicated in the discussions of these experts who feel that scientific research and development have now placed their industry in a position for rapid expansion in the future.

The important place fuels have in the trend toward greater speeds was shown in a paper presented at the fuels section by First Lieut. F. D. Klein, Air Corps, Material Division of the U. S. Army. He explained the results obtained in tests of 100 octane motor fuel both in the laboratories and actual flight tests. For the first time it was made known that 100 octane fuel was used at the Mitchel Trophy Race held at Selfridge Field, Michigan, last November. The 10 airplanes which competed were equipped with high output engines, which Mr. Klein explained could not be opened fully near the ground. With the 100 octane fuel the airplanes could be operated safely at considerably higher speeds than was possible using what is known as Y-3357-G fuel, which according to the army method of testing has an octane rating of 92. The race, which was confined to standard service type pursuit planes with no racing planes competing, was won at 216.8 miles per hour.

Increased Power Output

Regarding the results of this and other types of test Mr. Klein said: "The marked increase of 15 to 30 per cent in power output possible with 100 octane possible with 100 octane fuel over that obtainable with fuel of 92 octane number by the Air Corps method of knock test clearly demonstrates not only the advantage of this fuel, but more important, the extreme desirability from a military standpoint of adopting such fuel as a means of greatly increasing engine performance with relatively little increase in weight, provided that engines are designed to take full advantage of the higher antiknock value fuels."

Commercial Application

The 100 octane motor fuel will also find an application in the commercial aviation field, according to Dr. Graham Edgar, vice president of the Ethyl Gasoline Corp., who has been closely associated with developments over the past 10 years which have brought a steady improvement in the antiknock ratings of gasolines. Doctor Edgar, who was chairman of the fuels division, outlined the recent developments in the synthetic production and blending of fuels of high antiknock properties and said in conclusion that "it is definitely the writer's opinion that fuels of 100 octane number and above will come into wide use and will prove to be an economy in commercial air transport operation."

Regarding aviation fuels available at this time Doctor Edgar explained that three general classes are available having octane ratings of 73, 80 and 87.

The proportion of 87 octane in use is rapidly increasing the new demand coming largely from heavy duty transport units. This 87 octane gasoline under the Army Air Corps method of tests is generally given a 92 octane rating and this is the fuel referred to in Mr. Klein's paper which will be summarized later.

Sources of Fuels

Answering the general questions of whether fuels of better than 87 octane will be available and how such fuels will be made, Doctor Edgar said:

"The highest antiknock fuels of today are made by distilling selected crude oils known to give gasolines of high natural antiknock value, and then adding tetraethyl lead. This process appears to have reached an approximate limit around 87 octane number. Cracking processes (in the present sense of the word), in which the higher boiling constituents of crude oil are broken down into material boiling in the gasoline range, appear today to offer no prospect of producing an aviation gasoline better than 87 octane number, either with or without the addition of tetraethyl lead.

"Hydrogenation has been said to be capable of producing gasoline of very high octane number, but there is conflicting information on this point, and it cannot be said with confidence that this process can or will produce satisfactory aviation gasoline of antiknock value substantially higher than 87.

"How then can gasoline of 100 octane number and above be made?

"The writer suggests that it can be most easily made by breaking down the petroleum molecules into small bits, as it were, and then rebuilding them into fuels of high antiknock value—in other words, by synthesis. The breaking down process occurs today accompanying every cracking operation. A portion of the oil is broken down into gaseous material, containing one, two, three or four atoms of carbon per molecule. It is here that I believe we may find the starting point for the aircraft fuel of the future.

"Given our small molecule, and assuming that we can build it up in various ways, what chemical type of fuel do we wish to form from it? Here, fortunately, considerable data are available, as a result of experimentation upon pure hydrocarbons.

"Three classes of hydrocarbon are known which possess extremely high antiknock value. These are (1) condensed or branched chain paraffins. Iso-octane (2,2,4—trimethylpentane) is an example of this class, and others are known of even higher antiknock value; (2) branched chain olefins, of which di-isobutylene is an example; and (3) certain aromatic hydrocarbons, preferably more complex than benzene itself.

"Of these classes, it would appear that for high performance aircraft fuel, the condensed paraffins offer the greatest possibilities, as they retain their high antiknock value under almost all conditions; they are chemically stable, and they have the highest heat of combustion per pound.

"Both the branched chain olefins and the aromatics have the disadvantage that their antiknock value varies greatly with the conditions of test. The olefins are relatively unstable chemically and suggest the possibility of poor storage characteristics, although this may prove to be unimportant.

"The aromatic hydrocarbons possess the lowest heat of combustion per pound, and in some cases, an unpleasantly high freezing point.

"In addition to the hydrocarbon fuels there is the possibility of synthesizing oxygenated compounds such as alcohols, of various molecular weights and structures. Little is known of their possibilities as aircraft fuels, but all of them have the disadvantage of possessing considerably less heat of combustion per pound than the hydrocarbons.

"At the present time more is known about the synthesis and full-scale engine use of iso-octane than of any of the other fuels suggested above. It has been eight years since our own laboratory first described the high antiknock value of this material and proposed its use as a primary standard for antiknock determinations. Within the last two years, substantial quantities of it have been prepared in reasonable purity by more than one oil refiner, starting with the isobutylene of refinery gases.

"It should be pointed out that, of necessity, synthetic fuels will be substantially more expensive than those produced by simple distillation methods. They will, therefore, only come into wide commercial use if their advantages in the way of power production possibilities are great enough to outweigh their extra cost. In the interest of economy, it is probable that any such fuel will be used as a blending agent, being blended with the best available gasoline, and also probably with conventional antiknock agents rather than in the pure state.

Calculating Costs

"One important fact to remember is, and this fact is not always recognized by the air transport operator, that fuel cost should be estimated on a 'cost per ton-mile of payload' basis rather than on a 'cost per gallon' basis. If fuel of extremely high antiknock value permits a sufficient power increase, the cost per ton-mile of payload may be lower even if the cost per gallon is doubled. Recognition of this principle by airline operators will do much to further the development of better fuels."

Engine Performance

Mr. Klein in his paper, which was entitled "Aircraft Engine Performance with 100 Octane Fuel," explained that about a year ago the production of commercial iso-octane on a larger scale made it possible to secure a substantial quantity of the material for blending at a cost which was not prohibitive. The Air Corps as is generally known among the larger refiners, prepared a specification for a 100 octane motor fuel at that time known as No. X-3575. In addition to the higher antiknock value, the specifications provided that the maximum tetraethyl lead content was to be 3 ml. per gallon which compares with 6 ml. per gallon allowed in Air Corp specifications No. Y-3557-G. Mr. Klein explained that it now appears that this higher octane fuel with the reduced lead content would shortly be available in the quantities required. The lower lead content is desirable because it reduces engine corrosion.

Fuel Properties

Last May the Army Corps obtained 1,000 gallons of the iso-octane (2,2,4 trimethyl pentane) and this was blended with aviation gasoline and 2,000 gallons of 100 octane was thus secured containing 3 ml. of lead. Mr. Klein explained the experimental work in which four fuels were selected for testing on a basis of comparative performance with the 92 octane Specification Y-3557-G fuel. A brief description of the four fuels follows:

1. 50 per cent iso-octane plus 50 per cent aviation gasoline with 3 ml. lead.
2. 50 per cent iso-octane plus 50 per cent aviation gasoline with 6 ml. lead.
3. Standard reference fuel C-6 with 8.5 ml. lead.
4. 37.5 iso-octane plus 37.5 high antiknock fuel about half composed of aromatics plus 25 per cent iso-pentane with 1 ml. lead.

As shown No. 1 fuel differed from No. 2 fuel only in lead content. Later tests showed no appreciable difference in antiknock value reflecting apparently the poor lead susceptibility of 100 octane fuels. In No. 4 fuel, the iso-octane was used to increase the antiknock value of lead susceptibility of the aromatic fuel and the iso-pentane was added to reduce the A.S.T.M. 10 per cent evaporated point so that it would conform to the requirements of Specifications X-3575.

Mr. Klein then explained with the aid of charts the results obtained in testing these fuels with two engines, one of which was a Wasp and the other Cyclone. Regarding the test data he said in part: "The greater increase in power output obtained in the case of the Cyclone engine as compared with the Wasp, was due to the special impeller used to give extremely high degree of supercharger in order to show, as clearly as possible at this time, the value of 100 octane fuel in engines having high enough output available to take sufficient advantage of such fuel. With engines designed specifically for operation on 100 octane fuel, still greater gain in performance should be obtained, particularly at high altitudes.

Antiknock value has been found to decrease at the rate of one octane number per 11-18 F. increase in mixture temperature so that highly supercharged engines, to take full advantage of the high antiknock value of the fuel, would probably require intercoolers for maximum performance on take-off and at low altitude, regardless of the antiknock value of the fuel used.

"The multicylinder engine tests show close agreement of the 100 octane fuels with their rating in the CFR engine under the Air Corps method of test, with the one exception of fuel No. 4 which in the Cyclone engine appears to be about two octane numbers lower than indicated by the CFR knock test. It is interesting to note that fuel No. 2, although it contains more lead than fuel No. 1, is rated the same, both by the multicylinder and the CFR engine.

"In this connection, pure iso-octane upon the addition of 3 ml. of lead per gallon has been found to increase only the equivalent of three octane numbers in antiknock value, when tested in accordance with the Air Corps method of antiknock test."

In regard to the flight tests with pursuit planes at Wright Field, Mr. Klein explained that difficulties have been encountered with engines overheating when operated on Specifications Y-3557-G fuel.

"In one case it was essential to determine high speed on the speed course," he said, "full throttle operation was made possible by the use of 100 octane fuel. In another care overheating was experienced in checking the rate of climb; by substituting 100 octane fuel, the cylinder head temperature dropped about 30° C., making it possible to complete the test without exceeding the maximum allowable cylinder temperature."

Distillation Curves of the New Premium Fuels Show Unusual Characteristics

What is a premium motor fuel? If that question is put to the average motorist he will probably answer, "The one that costs the most." If that question is answered by a technologist of a refining company he will probably disagree with a majority of opinions expressed by technologists of competing refining companies.

Thus far, premium motor fuels have simply been the best gasolines that the individual refining companies have chosen to manufacture. Changes in the quality of the group have been the fore runners of trends in motor fuel quality generally. Except for the uniformity of distillation range and anti-knock value for Ethyl Gasoline demanded of licensees of the Ethyl Gasoline Corp. there has been a strong tendency among refiners to work out their manufacturing experiments with the idea of introducing a "new premium fuel."

New Distillation Curves

This winter there has been a resumption of that tendency and a graph showing distillation curves of typical samples of three important premium fuels introduced recently in the East and North helps to emphasize the diverging ideas in regard to premium motor fuel quality.

It will be remembered that each the three premium aviation fuels are designated as B, C and D, while the average of the 12 fuels is shown as A.

Motor Fuel A

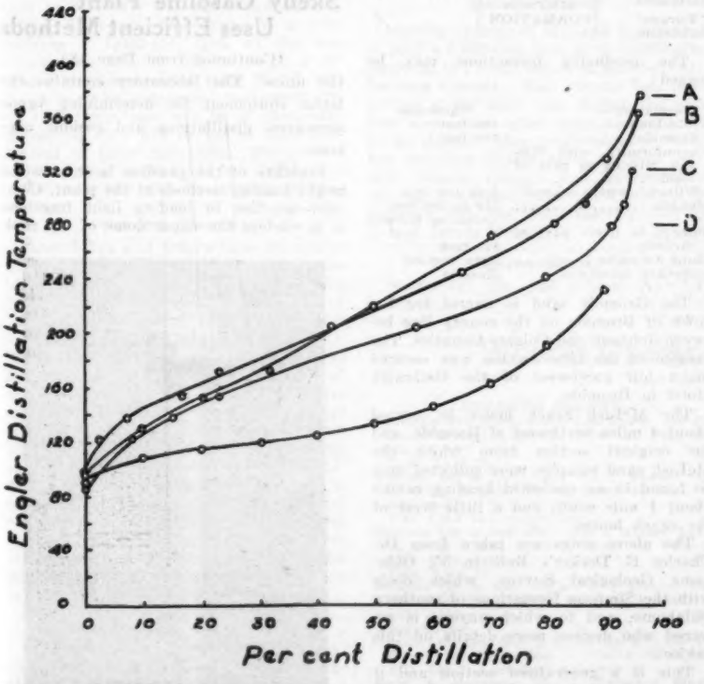
Motor fuel A reveals a smooth distillation curve, but the line is consistently high after passing the 50 per cent point. Such a fuel would be expected to give quick starting and provide an even flow of power as the motor is accelerated.

These data were obtained from distillation tests made on 12 samples of premium gasoline marketed by major refining companies through stations located in Chicago, Fort Worth, Tulsa, Kansas City and Cleveland. The average probably represents the distillation characteristics of the great bulk of the premium fuels sold in these communities. The average of the tests on the 12 samples is shown below:

Initial point:	94°F.
10 per cent	132
20 per cent	157
50 per cent	225
90 per cent	338
Endpoint	392
Recovery, per cent	96.9
Vapor pressure, pounds	9.6
Octane number	75

Motor Fuel C

In the group of three aviation type fuels, motor fuel C reflects the least



Standard Oil Co. of New Jersey, The Gulf Refining Co. and the Phillips Petroleum Co. introduced an "aviation type" premium motor fuel comparatively recently. In each instance the shape of the distillation data reveals a new kind of curve. The designers of the new fuels seem to have shunned the idea of stream lining and have gone back to bulges and sharp breaks. It will be interesting to note future changes.

Without attempting to say whether this is a good or bad omen so far as the future of refinery operations is concerned, it does indicate that wide differences of opinion are being designed into the new fuels by major companies. The correctness of one over the other will have to be determined entirely by trends in the respective gallonage sales.

In the accompanying drawing are pictured the laboratory distillation results of the three motor fuels previously mentioned and the composite of 12 samples of "ordinary" premium gasoline. The diversion from the average but reflects a marked rise in the first 10 per cent of the curve. The characteristics of this gasoline follow:

Initial point:	88°F.
Per cent off at:	
122°F.	7
140°F.	16
158°F.	23
176°F.	32
212°F.	57
248°F.	80
284°F.	91
302°F.	93
Endpoint—333° F.	
Recovery 96 per cent.	
Vapor pressure,—9.9 pounds.	
Octane number 78.	

Motor Fuel B

The second of the group of three aviation fuels known here as B appears as sort of a compromise between the average and the new fuel D. Motor fuel B shows the lowest initial point and from the 30 per cent point throughout the balance of the curve, remains substantially under the average. Its characteristics is shown as follows.

Initial point:	95°F.
Per cent off at:	
122	3
140	8
158	16
176	32
212	62
248	86
284	91
302	97
356	96
374	96.5
Endpoint 387° F.	
Recovery—97 per cent.	
Vapor pressure—8.4 pounds.	
Octane number—77.	

Motor Fuel D

The most unusual motor fuel of the group has been called motor fuel D and reflects a substantial deviation from the beaten paths so far as intermediate distillation points are concerned.

The heavy bulge in the curve between the 30 per cent 80 per cent points distinguishes this curve from the rest but in addition, it should be pointed out that D was stopped at the 90 per cent point and the end point on the fuel was actually 285°F. The complete curve would have caused confusion in reading but if it is traced to completion will reveal a very sharp rise past the 90 per cent point.

The characteristics of motor fuel D follows.

Initial point:	93°F.
Per cent:	
10	110
20	116
30	122
40	129
50	138
60	152
70	171
80	198
90	240
Endpoint	385
Recovery—97 per cent.	
Vapor pressure—12 pounds.	
Octane number—76.	

Employment Provisions in Oil Code Before Board

(Continued from Page 34)

respect to sex. No justifiable complaints have been made against the present differentials based on geographic areas and population, as they approximate normal historical relationships within the industry.

15. Q. Are provisions such as several basic minimum wages, classified wage scales, equitable adjustment provisions, or other methods of maintaining wages above the minimum, desirable?

A. It is impossible to classify occupations on a national scale in an industry as complex as ours, or to find a meeting ground for the views of employers and employes as to proper minimum wage scales for such occupations. An attempt to promulgate such a scale would further and hopelessly overtax the present inadequate enforcement machinery. We believe that such matters are properly subject to local collective bargaining between employers and employes, and that code bodies should follow a "hands off" policy in this matter.

16. Q. Are wage and hour provisions desirable as temporary or as permanent measures?

A. Theoretically, minimum requirements may be socially desirable as permanent measures if they are reasonable and effectively enforced. Practically, at least in our industry because unenforced, they are desirable only as an emergency depression measure. In better times there have been but few complaints against oil industry working conditions, and it is doubtful if the old days of the 63- and 84-hour week will ever return in the Mid-Continent and Gulf Coast oil fields, now that they have been eliminated. They never returned in California, where they were reduced to 48 hours per week almost 8 years ago. That reduction was brought about through natural forces and not through legislation.

What Shall Be Done

17. Q. What shall be done to meet the problem of overlapping definitions?

A. Attention already has been called to the high maximum hour and minimum wage and full-time weekly earnings provisions in the petroleum code. It has been the firm position of the petroleum code authority that all work done normally by employes within the industry shall be done under the wage and hour provisoins of the Petroleum Code only, whether done by contract or otherwise as provided in our Article II, Section 5; but that extraordinary work such as new construction (other than in conjunction with strictly routine development) and special services should be optionally subject to the wages and hours of the industry with which the contractor is normally associated. We believe that this is a sound policy for codes of all basic industries that are overlapped by codes of service industries.

18. Q. What shall be done to meet the problem of multiple code coverage?

A. Many of our employers have chosen to follow the more restrictive labor provisions of our code in such special activities as operation of car-repair shops, can and drum factories, candle factories, etc. However, the Petroleum Administration and the Petroleum Code Authority have jointly held that such activities are optionally subject to the less restrictive labor provisions of the codes of the other industries. In the retail marketing field, the views of both groups are indicated by the interpretation of our Article V, Rule 2, which provides that, if a merchant or vendor of petroleum products also sells other products or renders services, employes working in separate departments shall be worked or permitted to work under the provisions of the code applicable to that trade or service, and that all other employes shall be governed by the provisions of that code from which the employer derives the largest part of his gross revenue. We believe that this is a sound policy to be followed in the administration of other codes.

Competing Industries

19. Q. What should be done to meet the problem of competing industries?

A. To date this problem has not been a serious one to our industry. However, we have experienced troublesome code evasion by certain of our petroleum producers who operate in natural gas producing areas because the natural gas industry is operating under the less restrictive provisions of the President's Reemployment Agreement. It is a simple ruse to drill for natural gas and accidentally obtain oil. Also, certain natural gasoline plants on main natural gas transmission lines produce natural gasoline and stabilized motor fuel which is sold locally in competition with refinery gasoline. Certain of these plants are operated under the provisions of the President's Reemployment Agreement. This, however, is in direct violation of a provision of the Petroleum Code, which is not heeded by certain units of the natural gas industry. In general, competitive industries of basically different character perhaps cannot be regimented, but the industrial structure will be greatly stabilized if codes of related or generally similar industries have similar wage and hour provisions.

20. Q. How effective are wage and hour provisions as measures for eliminating unfair competition?

A. As presently unenforced in our industry because of legal and political complications, their effectiveness in eliminating unfair competition has been practically nil. Such of the benefits in this respect gained from the code by our industry have resulted from partially effective control of crude oil and refined gasoline production.

At the hearing on our code labor provisions above referred to, our attention was attracted particularly to a statement made by Mr. William Green in support of the 30-hour week. It was to this effect: "The industry has greatly benefitted from the operation of the code . . . A substantial measure of economic stability has been attained. But the worker attached to the Petroleum Industry who has sought as eagerly economic stability for himself and his dependents, has failed to obtain such stability under the existing provisions of the code." As we stated in rebuttal, "Clearly this sophism is predicated on the false premises, refuted

by our factual data, that the petroleum industry has not reabsorbed its full share of pre-code unemployed workers, and that the 30-hour week is essential to accomplish this end; for otherwise it hopelessly condemns one of the principal aims of the entire recovery program as being impossible of fulfillment. Economic stability of workers presupposes continuity of employment at reasonable earning levels. The Petroleum Code has practically the shortest maximum allowable working hours for comparable types of operation. It has the highest minimum common labor wage rates and weekly earnings, a definitely promulgated though questionably valid historical basis for adjustment of minimum skilled job differentials and an unusually favorable continuity of employment. It has reestablished normal employment generally at an average level 7.7 per cent above 1929. If a worker cannot find reasonable economic stability under these conditions, there is no economic security or stability to be expected under any of the codes. We characterize the present effort through administrative fiat to secure substantial increases in the outstandingly favorable comparative benefits already guaranteed workers under the Petroleum Code as having neither economic nor social justification."

Greatest Activity in Fitts Field, Oklahoma

(Continued from Page 11)

tom of the casing in the annular space between outside of casing and drilled hole is high If the gas sand formation pressure is only about 650 to 700 pounds per square inch as reported and these sands are permeable it is assumed that much of the cement penetrates into the gas-bearing formation and therefore does not come up to the desired height above the base of the casing.

Another theory is that enlarged hole due to excessive caving of shales requires

Small section of the new Fittstown, Pontotoc County Okla.

more cement to fill than calculated, so no returns are secured.

If returns are not secured it is usual practice to pump in thin cement slurry from the surface and force this cement mixture down as far as possible back of the casing. The difficulty with this practice is that there is no way of being certain that the two batches of cement meet back of the casing.

In the event that cement from below and cement from above does not entirely fill the annular space behind the casing it is possible that one or more gas sands may be left open to the enclosed annular space and while this gas cannot escape to the surface direct, if more than one sand is not covered with cement it is possible for the gas from the higher pressure formation to travel into the lower gas sand and perhaps charge it in such a way as to cause added pressures to build up in a normally low pressure formation and this may blow out in adjacent wells.

Or if the blowout does not occur at once in time movement behind the casing may create conditions that may result in future difficulties. It is admitted that it is not good practice to leave a portion of the space between casing and hole open and there is a movement now under way to secure co-operation between all well owners to establish standardized drilling and cementing practices that will eliminate faulty jobs in the future.

It is possible that surface pressure control drilling may be applied to this area both to drill the holes through the upper gas sands and also to drill into the pay sands in a uniform manner. Engineers are now investigating these methods in Texas fields where they have been applied with marked success.

Straight Hole Drilling

Most of the holes drilled in the Fitts Pool so far have been vertical with small deviation. Contractors are careful to check the verticality of holes frequently and if they are not straight to plug back and straighten. In the surface hole that is 17-inch diameter 6⅝-inch drill stem is used, also this size stem in the 11-inch hole if drilled either to 2,000 feet or to the top of the producing formation. If the hole is reduced in size below 11-inch it is usual practice to use 4½-inch drill stem.

One well is being drilled to each 10 acres under the present plan, and in the agreement entered into under the Federal Oil Administration code it is stated that 275 wells are to be drilled this year but it now seems that this number of operations will have to be increased, for it is hardly probable that offset wells will be deferred for six or eight months merely to follow out a plan that was adopted early in the life of the field. It is believed that adjustment will be asked for and granted because the field is being produced under proration conditions and even if the completions find oil it does not mean that the field's allowables will be increased to more than market demand.

The area included in the Fitts Pool unit agreement is defined as Sections 18, 19, 29, 30 and 31 in Township 2n and Range 7e, and Sections 24, 25 and 36 in Township 2n, Range 6e, a total of 5,120 acres. If all sections are productive this will mean 512 wells on the 1 to 10-acre spacing, but it is now believed that all the leases will not be productive, so the estimated number of wells needed will be probably about 400, and of that number 102 locations are accounted for in the tabulation above.

Production Methods

When the string of 7-inch casing has been set above the Simpson formation it is usual practice to drill in until a good well is assured. The production may be found in the top of the Simpson or lower down. The bottom hole pressure of the producing formation has been found by testing with bottom hole pressure instruments to be about 1,870 pounds originally and had dropped to about 1,850 pounds since the field had been opened. Up to February 1 the reported production has been about 420,839 bbls. of oil. This is a drop of 1 pound in reservoir pressure for each 21,000 bbls. of oil produced to date, a high rate but perhaps due to the equalization of pressures throughout the field.

A few typical potential tests are 4,827 bbls. of oil produced with 2,400,000 feet of gas and reservoir pressure 1,837 pounds; 3,015 bbls. of oil, 1,400,000 feet of gas and 1,882 pounds pressure, and 5,075 bbls. of oil, 2,400,000 feet of gas with 1,796 pounds bottom hole pressure.

The wells are being tubed with 2½-inch diameter tubing as soon as the open flow potential tests are completed, and it is believed that producing through tubing and chokes will greatly reduce gas-oil ratios. It is probable that this rapid drop in pressure has occurred because the original formation pressure was higher than a hydrostatic head would have been for this depth of well. A 4,200-foot column of clear water will exert approximately 1,818 pounds per square inch pressure. The original reported bottom hole pressure was 1,870 pounds or about 58 pounds higher than the hydrostatic head pressure and some operators seem to think that the method of taking open flow potentials through the casing has permitted the formation pressure to drop to what would be normal hydrostatic pressure for a formation at this depth.

These bottom hole pressures were taken at minus 3,300 feet below sea level, or they were all adjusted to that level and found to be the same in the Viola and Simpson formations.

There is still considerable discussion about the sections of the Simpson formation from which the production is being secured. The Simpson formation of Ordovician age has been divided into four producing sands in a table prepared by Luther H. White and published in Oklahoma Geological Survey Bulletin No. 40. Mr. White tabulates this data as follows:

DIVISIONS OF SIMPSON FORMATION

Oil field names—	Formation equivalents	Age
Post "Wilcox" (Bromide)	UPPER AND MIDDLE SIMPSON FORMATION	Ordovician
"Wilcox" sand		
Green series ("Irish" sand or "McLish") ...	Tyner formation	
"Hominy" sand	"Burgen" sandstone	

The producing formations may be logged:

Formation—	Thickness
Viola lime	400 feet
"Bromide"	100 feet
Unconformity, with Wilcox missing in part of field	.....
"Wilcox," where present.	0 to 100 feet
McLish	350 to 400 feet, including Burgen
Burgen in lower part of McLish	125 feet
Joins dolomite	Thin section
Arbuckle limestone	Massive

The Bromide sand is named for the town of Bromide on the county line between Johnson and Colgate Counties. The sample of the type section was secured on a hill northwest of the Galbraith Hotel in Bromide.

The McLish ranch house is located about 4 miles northwest of Bromide, and the original section from which the McLish sand samples were collected may be found in an eastward heading ravine about 1 mile south and a little west of the ranch house.

The above notes are taken from Dr. Charles E. Decker's Bulletin 55, Oklahoma Geological Survey, which deals with the Simpson formations of southern Oklahoma, and to which anyone is referred who desires more details on this subject.

This is a generalized section and it varies with relative position of the well to faults and structure within the field.

The important thing still to be developed is the total thickness of the producing formation. Up to date no wells have penetrated entirely through the Simpson sections and into the Arbuckle because, if they were in a pay section, it was not necessary to drill the wells below the Burgen sandstone. The operators stop when they have a good well and do not drill ahead into possible water. This is safe and good practice. Later some of the wells may be deepened and still lower pays found in the Ordovician formations.

Type of Metal Determines Oiliness of Lubricants

(Continued from Page 29)

molecule of the 'true' lubricant; second, structure of the fields of force surrounding all of the other constituents of the true lubricant and its carrier; and, third, structure of the fields of force emanating from the surfaces to be lubricated.

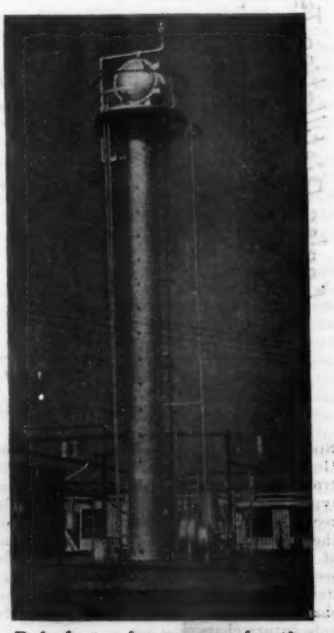
In the past the first two factors have been lumped together indiscriminately, while the third has been neglected or but dimly understood except by such leaders as Mougey, as quoted hereafter. The following brief explanation of the above definition is offered. The first factor has been discussed above. Regarding the second factor: If the structure of the fields of force surrounding the molecule of any constituent of the oil is such that this substance displaces the true lubricant from contact with and adherence to the surface to be lubricated, and if this constituent is not a lubricant itself, the effect of lubrication will be destroyed. This will happen, for example, if alcohol in sufficient quantity is added to lubricating oil or if sludge has accumulated therein. The alcohol and the sludge displace the oil from contact with the metal, and not being good lubricants in themselves, cause trouble. The tremendous importance of the third factor lies in the fact that the power of wetting, so vital in all lubrication, varies not only with the wetting substances, but with the substance to be wetted. It is because of this that H. C. Mougey found that a lubricant that works efficiently in a testing machine with steel against steel, may or may not work well with steel against bronze (E. P. Lubricants, Volume 32, May, 1933, J.S.A.E., page 196). Any measurement, therefore, that does not give proper values to all three factors enumerated above is either worthless or misleading.

Skelly Gasoline Plant Uses Efficient Methods

(Continued from Page 18)

the units. The laboratory contains the latest equipment for determining vapor pressures, distillations and residue content.

Stability of the gasoline is emphasized in the loading methods at the plant. Common practice in loading light fractions is to enclose the vapor dome of the tank



Dehydrator for propane fraction

car and return the vapors evolved during filling, to the plant to be condensed. At the loading racks in this plant no such procedure is necessary, the low boiling fractions being completely stripped from the gasoline cuts. When loading the more volatile products such as Skelgas, pressure containers are used. All gauging is done by weight. The drums and cylinders are placed on scales and are fed by flexible lines, the vapor space being regulated according to the characteristics of the product to be shipped.

Eleven Locations Staked in West Texas District; Wichita Falls Area Reports 35 New Locations

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Feb. 4.—Eleven locations were reported in the West Texas district this week, and twelve tests completed, all producers, with one an Ordovician well in the Big Lake Field, Reagan County, which extended the deep producing area on the northwest side one-quarter of a mile, proving more acreage to deep production for the Big Lake Oil Co.

Cardinal Oil Co., of San Angelo, has contracted to drill four 700-foot tests, free, and develop the White Brothers ranch in northern McCulloch County, where the two fee owners recently completed a 25-bbl. well at a total depth of 670 feet. The contracting company has made location for No. 2 White, diagonally southwest of No. 1 on an offset location. Location is 1,202 feet from the north and 1,963 feet from the east lines of Section 2, William Dewey Survey. Brock and Seward, of Brady, are to do the drilling.

If production justifies, Cardinal Oil Co. will lay a small pipe line from the area to Mercury, 5½ miles east on the Frisco Railroad. The company is now building a 1,000-bbl. tank at the discovery well. No. 3 test is to be a diagonal southeast offset from No. 1 and No. 4 is to be a diagonal northwest offset. All three tests will be of particular interest as they will extend or limit production in three directions. The discovery has been drilled 15 feet deeper, or to 685 feet, but with no increase in production.

Coleman County

John Aiken and others have secured a 4,000-acre block out of 8,000 acres of the McFalls-Curtis ranch, centering in the C. Mende Survey, about 5 miles south of the shallow discovery and are to drill four 700-foot tests on their block. W. D. Brookover and others have obtained 960 acres across the river north and west of the discovery on the White Brothers ranch in McCulloch County, this acreage falling in Coleman County. The block was obtained from J. M. Gill and others, and centers in the south half of the J. Armendaris Survey. A 1,000-foot test is to be drilled in the southwest corner of the survey. Two dry holes, one drilled to 1,012 feet and the other to 1,685 feet, are located on the block, the latter being about 1,000 feet from the location just staked by Brookover.

Winkler County

Maxwell and others' No. 1 Oscar Clapp, Section 37, Block 26, east of the Hendricks Field, Winkler County, on a trend between the Howe and Halley sandy lime discovery wells, stopped drilling at 3,481 feet after an increase in sulphur water from 3,460-70 feet caused it to flow water, and is to plug back to shut off water and shoot the saturated streak from 3,185-3,205 feet, where it previously had a showing of oil. If this test fails to come through as a producer it may prevent the two widespread areas on the trend from connecting by producing wells, although there is a possibility it may swing to the east, which will be proved when Jeffries and others' No. 1 Brown and Aultman, in Section 6, Block B-25, about 2½ miles southeast, is completed. This test has been held up by a fishing job, after getting a good showing of oil. Total depth is 3,008 feet. It is due south of Kermit, 1½ miles. Another test is drilling in the Kermit townsite.

Pecos County

Cardinal Oil Co. has taken two blocks south of Gulf Production Co.'s No. 3 White and Baker discovery, approximately 9 miles west of the Yates Field, Pecos County, and is to drill two wildcats. One block is on the G. R. White and J. T. Baker ranch and consists of 6,560 acres. The other block consists of 5,616 acres and is on the White and Baker and Wilson and Lowery lands. Locations will soon be staked for these tests. Gulf Production Co. has spudded No. 4 White and Baker, 1 mile east of its discovery well. Location for the new test is in Section 46, Block Z, T.C. Survey.

Andrews County

R. H. Gill and others of San Angelo are reported assembling a drilling block between the Means and Deep Rock Pools in Andrews County. Tentative location is reported in Section 26, Block A-36, Public School Lands Surveys. This will be an interesting test due to its falling between the two areas where no other test has been drilled.

Dawson County

Marvin Croome of Midland is expected to drill a 5,000-foot test on a 10,000-acre block on the Dean ranch in northeastern Dawson County. This county has been getting a big lease play during the past two weeks, and other tests are expected to be drilled. One independent concern has acquired 12,000 acres in west central Martin County and contemplates drilling a wildcat. The block centers in Leagues 247 and 248, Hartley County School Lands Survey.

Reagan County

Skelly Oil Co. and others' No. 1-D Grayson-University, 7 miles southeast of the Big Lake Field, and in Reagan County, topped the Simpson, middle Ordovician, at 9,400 feet, or 6,509 feet below sea level, and is drilling with but little chance of making a producer, since it is running at least 1,080 feet lower structurally than the top of the Simpson on the highest well and 760 feet lower than lowest Ordovician producer in the Big Lake Field. There are seven companies interested in the 5,200-acre block surrounding the test.

WICHITA FALLS DISTRICT

There were 35 locations staked in the Wichita Falls district and 28 completions, 12 of which proved dry and were abandoned.

Foard County

L. C. Heydrick and others, of Wichita Falls, have secured a 4,500-acre block for a 4,500-foot cable tool test to be located at the common corners of Cottle, Foard, King and Knox Counties. Location is about 8 miles south of the Texas Co.'s producers on the Les K. Johnson ranch on the extreme west edge of Foard County.

Sinclair Prairie Oil Co. and Texas Pacific Coal & Oil Co., which have been partners in a number of leases in Eastland and Stephens Counties, in the Ranger district, are dividing their holdings in this area. Texas Pacific is taking over the properties south of Breckenridge and Sinclair Prairie control of all properties north of that town.

Production in the Ranger and Wichita Falls district during 1934 increased 5,000,000 bbls. over the 1933 figures. The acid treatment of wells was the greatest aid in expanding the production, especially in the lime-producing areas of the Wichita Falls district, where drilling was the heaviest in five years. Many good wells were completed and the demand for the oil held up better than since 1929.

Production in the Wichita Falls district averaged 63,000 bbls. per day during the week, an increase of around 245 bbls. per day over last week.

PANHANDLE DISTRICT

There were 15 producers completed in the Panhandle district during the week, with locations staked for 16 more. Texas Co.'s No. 1-C Taylor, in Section 52, Block B-2, H.&G.N. Survey, Gray County, was the most interesting of those completed, as it extended production in Gray County, opening more acreage south of the granite wash ridge. It made an initial production of 223 bbls. at total depth of 3,006 feet. The striking of oil in this test a few weeks ago led to the staking of a number of locations, and will probably lead to considerably more production in this extension area.

COMPLETIONS IN WEST TEXAS

Ector County

Empire Gas & Fuel Co.'s No. 1 Wight, top pay 4,105 feet, total depth 4,278 feet; shot 300 quarts from 4,104-4,265 feet; initial production 1,013 bbls. Shell Petroleum Corp.'s No. 1 Connell, top pay 3,444 feet, total depth 3,664 feet, shot 443 quarts from 3,357-3,660 feet, initial production 202 bbls. per day pumping.

Fisher County

Southern Oil Co.'s No. 2-B Pardue, top pay 3,098 feet, total depth 3,105 feet, initial production 20 bbls. per hour.

Glasscock County

Simms Oil Co.'s No. 6-A Coffee, top pay 2,106 feet, total depth 2,135 feet, initial production 25 bbls. oil and 22 bbls. water per day.

Howard County

Taylor-Link Oil Co.'s No. 2 Abrams, total depth 2,350 feet, initial production 1,104 bbls. pumping.

Pecos County

Amerada Petroleum Corp.'s No. 2-A University, total depth 1,664 feet, initial production 168 bbls. per day, 2 per cent water.

Reagan County

Big Lake Oil Co.'s No. 16-C University, total depth 8,450 feet, initial production 45 bbls. per hour.

Ward County

Leidecker's No. 3 Archenhold, top pay 2,425 feet, total depth 3,060 feet, initial production 443 bbls. pumping. Sinclair Prairie Oil Co.'s No. 6 Archenhold, top pay 2,584 feet, total depth 3,068 feet, initial production 172 bbls. per day pumping, shot 200 quarts from 2,980-3,068 feet and 200 quarts from 3,540-4,390 feet. Duffey and others' No. 3 Hayslett, top pay 2,440 feet, total depth 3,073 feet, initial production 74 bbls. pumping. Richardson's No. 14-B Johnson, top pay 2,375 feet, total depth 2,590 feet, initial production 1,451 bbls. per day.

COMPLETIONS IN WICHITA FALLS

Archer County

Bridwell Oil Co.'s No. 5-A Falls County, top pay 1,143 feet, total depth 1,155

(Continued on Page 46)

Wildcat Operations in West Texas

Week Ended February 1

ANDREWS COUNTY

Fuhrman Pet. Corp.'s No. 2-B Boner, 440 ft. from N and 1,320 ft. from E, Sec. 25, Blk. A-43.
Drlg. 2,892 ft.

Humble Oil & Ref. Co.'s No. 2 Means, 660 ft. from N and 1,980 ft. from W, Sec. 11, Blk. A-35.
T.D. 4,558 ft.; completing.

Humble Oil & Ref. Co.'s No. 3 Means, 1,980 ft. from S and 3,300 ft. from W, Sec. 4, Blk. C-45.
Drlg. 3,454 ft.

Humble Oil & Ref. Co.'s No. 3 Means, 660 ft. from N and 1,997 ft. from E, Sec. 9, Blk. A135.
Rigged up.

Stogner et al's No. 1 Richardson, 1,980 ft. N and 660 ft. E, Sec. 4, Blk. A-37, P.S.L.
T.D. 590 ft.; crooked hole 550 ft.

York & Harper's No. 1 Hereford Stock Farms, C Labour 12, League 315, Parmer Co. School Lands.
T.D. 1,525 ft.; underreaming.

BREWSTER COUNTY

F. C. Dodson's No. 1 Texas American Syndicate, 660 ft. from N and E, Sec. 66, Blk. 10, G.H.&S.A. Sur.
Location.

Joiner et al's No. 1 McIntyre, 353 ft. from S, 2,390 ft. from E of Sec. 21, Blk. 352, W. M. Mitchell Sur.
Trying to drill by bit 3,100 ft.

King & Franklin's No. 1 Gage Est., C Sec. 138, Blk. 22, G.H.&S.A. Sur.
Underreaming csg. 575 ft.

S. G. Smith's No. 1 Decie, 2,490 ft. from S and E, Sec. 7, Blk. 1.
Drlg. 546 ft.

COCHRAN COUNTY

Kelsey's No. 1 Slaughter, C Labour 36, League 150, R.C.S. Lands.
Derrick.

West Texas Development Co.'s No. 1 Slaughter, near C of Labour 52, League 149, Randall Co. School Lands.
Derrick

CRANE COUNTY

Strauss' No. 1 Phelps et al, 2,113 ft. from N and 713 ft. from NW Sec. 12, Blk. 31, H.&T.C. Sur.
Drlg. 2,038 ft.

Gulf Prod. Co.'s No. 1 Waddell, C NW NW Sec. 4, Blk. B-27, P.S.L. Sur.
Drlg. 2,100 ft.

Gulf Prod. Co.'s No. 9 Waddell, C of NE, Sec. 11, Blk. B-23, P.S.L. Sur.
Drlg. 906 ft.

Wahlenmaier Pet. Corp.'s No. 1 Kloh, 330 ft. from S and 1,698 ft. from W, Sec. 33, Blk. 43, Twp. 4s, T.&P. Sur.
Drlg. 320 ft.

CROCKETT COUNTY

Eppenauer Drlg. Co.'s No. 1-C Powell, 1,660 ft. from S and 250 ft. from E, Sec. 53, Blk. BB, G.C.&S.F. Sur.
Rigged up.

Leslie-Hiller et al's No. 1 Todd, 1,300 ft. N and 330 ft. E, Sec. 26, Blk. WX, G.C.& S.F. Sur.
S.D. 550 ft.

Humble Oil & Ref. Co.'s No. 1 Couch, C NW Sec. 3, Blk. QR, G.C.&S.F. Sur.
Drlg. 1,475 ft.

CULBERSON COUNTY

Anderson-Pritchard Oil Corp., Magnolia Pet. Co. et al's No. 1 Borders, 1,255 ft. N and 2,305 ft. from W, Sec. 34, Blk. 69, P.S.L. Sur.
S.D. 650 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 31, Blk. 97, P.S.L. Sur.
S.D. 2,145 ft.; show oil 2,107 ft.

Wood et al's No. 1 Hall, 350 ft. from S and 85 ft. from E, Sec. 11, Blk. 54½, 16 miles N of Van Horn, P.S.L. Sur.
S.D. 246 ft.

DAWSON COUNTY

Adams & Turner's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.
S.D. 3,300 ft.

ECTOR COUNTY

Amerada Pet. Co. et al's No. 1 Holt, 1,980 ft. from S and E, Sec. 20, Blk. A.
T.D. 4,322 ft.; shot and cleaning out.

Atlantic Oil Prod. Co.'s No. 1 T. P. Land Trust, 440 ft. from N and W of SE Sec 11, Blk. 43, Twp. 1s, T.&P. Sur.
Drlg. 3,516 ft.

G. Farley's No. 1 Connell, 990 ft. from S and 330 ft. from E, Sec. 11, Blk. B-16, P.S.L. Sur.
Drlg. 1,176 ft.

Gulf Prod. Co.'s No. 1 Goldsmith, C of NW, Sec. 19, Blk. 44, Twp. 1s, T.&P. Sur.
S.D. for water.

(Continued on Page 46)

Prospect for New Field in Western Bee County; Loma Nova Extended to South and West

SAN ANTONIO, Tex., Feb. 4.—Prospects for another new field in the western part of Bee County was assured the latter part of the week when Dirks Brothers' No. 1 Foley, in the Normana district, 1 mile northwest of the old Holzmark gas field, topped the sand at 3,407 feet and was cored from 3,426-27 feet, where a drill stem test showed 400 pounds of pressure and some drilling fluid cut with oil. The test was made through a one-quarter inch choke on bottom and a five-sixteenths inch choke on top. The operators have cemented casing and it is to be given a production test by the middle of the week.

If the test makes a producer, as expected, it will make the third new pool to be opened by Dirks Brothers in Bee County within the past few months. The group known as Dirks Brothers and others is composed of Cliff and Lee Dirks of Tuleta, and George W. McMurry, independent operator and drilling contractor of San Antonio. The other two discoveries made by these operators include the West Tuleta Field and the Dirks Pool, 2 miles west of the West Tuleta Field.

Although no deal has been consummated, it is reported that five major companies, including Shell Petroleum Corp., Atlantic Oil Producing Co., Humble Oil & Refining Co., California Oil Co. and Stanolind Oil & Gas Co., are dealing with Dirks Brothers for their holdings around No. 1 Roth, the discovery well of the Dirks Pool. It is reported the operators are asking $500 per acre cash and a like amount out of oil for their 1,500-acre block.

Bee County

Other than the usual number of completions in the West Tuleta Field, Bee County, there was no important developments in the field during the week. Three completions were registered, all being within the proven limits: Blanco Oil Co.'s No. 2-A Perez, Houston Oil Co.'s No. 2 Strauss and Edwin M. Jones' No. 4 Skinner and Harris.

Two wildcat locations were made in the county: Humble Oil & Refining Co. is rigging up for No. 2 Thompson, 466 feet northwest of the southeast corner of J. C. Wood tract, in the William Burke Survey. Three miles west of Mineral, George L. Pace made location for a 4,000-foot test in the center of Block 26 of the Tarver-Henslee Subdivision, in the Thomas B. Barton Survey. A 5,000-acre block has been completed by Crabbe and others, 11 miles west of Pettus, who have turned some of the acreage for the drilling of a 3,000-foot test to start by April 1.

Lee County

In the Tanglewood area of western Lee County, Pederson and others' No. 1 Turner is reported to be preparing to test at around 6,500 feet, after it had tested sulphur water at a reported depth of 6,560 feet, reported to be in the Edwards lime. It is cemented back to the Georgetown lime, where a favorable showing of oil and gas was encountered. In the same area, Humble Oil & Refining Co.'s No. 1 J. Simmons, near the town of Lexington, is drilling below 3,777 feet.

Duval County

In the Loma Nova Field, east of the Government Wells Field, Duval County, Magnolia Petroleum Co.'s No. 2 Herbst extended the producing limits of this new field a half mile south and the same distance west when it flowed by heads at the rate of 22 bbls. of oil the first 15 hours from a total depth of 2,749 feet. Seven-inch casing was cemented after a drill stem test from 2,745-49 feet, tested 100 feet of oil with a small amount of gas. Evidently the wells completed in this area will be small producers, as the gas pressure is not considered strong enough to flow the wells for any length of time. Humble Oil & Refining Co.'s No. 1 Vela, west of the discovery, is being rigged up with a pumping unit after it failed to flow when tested. It is standing with a hole full of oil. Texas Co. has made location for No. 1 Vela, west of the discovery in Survey No. 42.

Guadalupe County

Southwest of Darst Creek, Guadalupe County, Diamond Half Oil Co.'s No. 1 Schmidt, topped the Edwards lime at 2,667 feet and was abandoned after it tested sulphur water at a total depth of 2,672 feet. It is in the Wakefield and Stewart Survey, east of the town of Kingsbury in the northern part of the county. In the southern part of the county, Trout and others' No. 1 McKee, another wildcat in the Green Dewitt Survey, 4 miles southwest of Darst Creek, topped the chalk at 2,893 feet and is drilling in chalk below 2,933 feet.

Frio County

The only other important test drilling along the Fault Zone area at this time is Amerada Petroleum Corp.'s No. 3 Halff and Oppenheimer, on the company's large block near the town of Pearsall in Frio County. It is drilling below 3,500 feet and will probably test around 3,900 to 4,000 feet, where the company's No. 2 Half and Oppenheimer is now making approximately 10,000,000 feet of gas and a small amount of oil per day. It was plugged back, and the casing perforated below 3,900 feet after the operators had twisted off the drill stem below 10,000 feet.

San Patricio County

At the close of the week, Plymouth Oil Co. was preparing to make a drill stem test on its No. 2-B Welder in the Sinton area, San Patricio County, at a reported depth of 6,590 feet. It was decided to test after the operators had cored a sand at that level and recovered only part of the core. In the same area, Heep Oil Corp.'s No. 1-B Welder is drilling below 4,700 feet, and should reach the 5,400-foot sand soon. In the Angelita area, southern part of the county, Humble Oil & Refining Co.'s No. 1 Welder cemented 10-inch casing at 304 feet and is drilling in shale below 1,540 feet.

Live Oak County

In Live Oak County, only one interesting test is now reported drilling. It is Lion Oil & Refining Co.'s No. 3 McNeil in the McNeil Field, 660 feet north and east of the discovery well, which is drilling below 2,500 feet. One mile north of the field, Coquart and others have abandoned No. 1 Little at 5,314 feet, and the rig is being moved to Luling Oil & Gas Co.'s No. 1 Rex, 2 miles north. It is reported Coquart and others have taken over the test and some of the acreage, and it will no doubt be drilled under the name of Coquart and others' No. 1 Rex.

Karnes County

Near Falls City, in Karnes County, E. E. Green's No. 1 Olive Henke, has been taken over by R. G. Tonkin and will be carried from its present depth of 2,672 feet to the contract depth of 2,800 feet, where an electrical coring test will be made. While washing to bottom, a good showing of gas was reported at 2,392 feet and an oil showing at 2,610 feet. It topped the Cook Mountain at 1,598 feet and is reported to be in the Mount Selman formation at its present depth.

Sam Fordyce Field

Two more completions were registered in the Sam Fordyce Field, southwestern Hidalgo County, bringing the total number of producers completed in the field to 32. Reserve Oil Co.'s No. 1 Seabury, northwest of the discovery in Tract 256, Porcion 38, cored saturated sand from 2,763-72 feet and was completed at a total depth of 2,774 feet for an estimated 400-bbl. well, under a tubing pressure of 925 pounds and closed in casing pressure 1,175 pounds. East of the discovery, J. M. Newman and others' No. 2A. F. DeFlores, Tract 275, Porcion 40, made an estimated 18 bbls. per hour on a one-quarter inch choke, with a tubing pressure of 750 pounds and casing pressure 1,100 pounds.

Three wildcat tests are active throughout the county. Two miles east of the field Harrison-Medlin and Daskam's No. 1 Gracia Land Livestock Co. in Porcion 42, Ancient Jurisdiction of Reynosa, is drilling below 2,900 feet. Three miles east of the field King-Wood Oil Co.'s No. 1 Osca Daskam in Lot 23-A, Block 49, Porcion 45, has resumed operations and is drilling below 3,567 feet. In the northern part of the county same operator's No. 1 W. M. Doughty, in Share 90, San Salvador Del Tule grant, is preparing to resume operation at a total depth of 1,836 feet.

Wildcat Operations in Southwest Texas

Week Ending February 2

BANDERA COUNTY

W. B. Kyle et al's No. 1 Duke, 200 ft. NW line, 150 ft. SW line of J. A. Bennett Sur. No. 7.
Waiting on rig; drlg. wtr. well.

Plateau Oil Co.'s No. 1 Garrison, G.C.&S.F. Sur. No. 506, 1,500 ft. from N and 2,700 ft. from E lines of survey.
Cmtd. csg. 1,181 ft.; moving in material.

BASTROP COUNTY

Marts & Beavens' No. 2 Ray Rivers, 1,850 ft. from SE line, 2,050 ft. from NE line of Eliz. Sandifer Sur.
S.D. 2,030 ft.

BEE COUNTY

Dirks Bros.' No. 1 Foley, 330 ft. N and W lines of Kellar Sur.
Sand 3,409-27 ft.; showed 400 lbs. pressure in 12 minutes; set csg.

Arthur W. Gray's No. 1 Rutledge, 3,323 ft. from S and E lines of 91-ac. tract in B. Q. Hadley Sur.
Location.

Cecil Hagan's No. 1 John R. Scott, 1¼ mi. NE of Morgan test.
S.D. 3,926 ft.

R. M. Herod's No. 1 Kimball, 810 ft. from E line, 150 ft. from N line of 110-ac. tract in S. Winship Sur.
Comp.; wtr. well.

Humble O. & R. Co.'s No. 2 Thompson, 466 ft. NW of SE cor. of J. C. Wood tract, Wm. Burke Sur.
Rigging up.

Mid-Continent Crude Oil Co.'s No. 2 Kimball (Grayburg area), S. Winship Sur.
Standing 3,550 ft.

Mid-Texas Oil Co.'s No. 1 Trabland, 330 ft. from S and E lines of 91-ac. tract, ½ mile E of Normana.
Rigging up.

George Pace et al's No. 1 Gores, C of Blk. 26, Tarver-Henslee Subd., Thos. B. Barton Sur.
Derrick.

L. W. Stieren's No. 1 Fox, N offset to Worth's No. 1 Rutledge.
Abd. 3,568 ft.

Worth Oil Co.'s No. 1 Rutledge, 1,000 ft. from N line and 350 ft. from E line of A. Hadley Sur.
Fishing 3,424 ft.; (correction).

BEXAR COUNTY

Campbell's No. 1 Cantu, offsetting Meador's No. 1 Cantau, 150 ft. SW line, Arocha Sur. No. 15.
Drlg. 800 ft.

N. G. Carter's No. 1 Ruiz, western part of county; (work over).
T.D. 1,710 ft.; standing.

C. A. Ingersoll's No. 1 Mann, S of Von Ormy in John Christopher Sur.
Rigging up.

Jones & Kieffer's No. 1 LaGrane, NW cor. of tract, 210 ft. each way, F. Rolen Sur.
Set packer at 586 ft.; working on test.

Geo. O'Neil's No. 1 Holly Crouch, NW cor. of 150-ac. tract.
S.D. 1,302 ft.

Duke Phillips' No. 1 Anna Lieck, 450 ft. SE line, 3,500 ft. NE line of 223-ac. tract, J. Liech Sur.
Waiting on orders, 912 ft.

BROOKS COUNTY

Heimrich & Payne's No. 1 Scott and Hooper, 1,320 ft. N and E lines of Blk. 44, Palo Blanco grant.
Drlg. 1,600 ft.

CALDWELL COUNTY

Kurz Oil Co.'s No. 1 Kurz ranch fee, 4,800 ft. SW line, 4,300 ft. SE line of Barnard Kincamp Sur.
S.D. 4,106 ft.

Reedy & Sugg' No. 1 Thos. North Estate, 150 ft. from SE line, 1,290 ft. from SW line of 95.5-ac. tract, A. Floyd Sur.
Setting csg. 2,200 ft.

DEWITT COUNTY

Lefevre & Spice's No. 1 A. C. Wilkins, 660 ft. from N line, 420 ft. from W line of 200-ac. tract, in James Ross Sur.
Drlg. 1,950 ft.

DUVAL COUNTY

Buffalo-Texas Syndicate's No. 1 Escobas, 2,777 ft. from N line, 1,944 ft. from W line of 930-ac. tract in San Francisco grant.
Coring sand 3,850 ft.

Eckert-Peacock et al's No. 1 C. W. Sutherland, 330 ft. N and W lines of SW¼ NE¼ of Sur. 188.
W.O.C. 2,366 ft.

Grimes et al's No. 1 Fitzsimmons, 300 ft. from S line, 150 ft. from E line of Sur. 291.
Drlg. 2,900 ft.

Humble O. & R. Co.'s No. 1 Mucio Vela, 330 ft. S and E lines of N½ of Sec. 42, T.T. Ry. Co. Sur.
T.D. 2,504 ft.; waiting on pump.

W. C. McBride's No. 1-B Haglst, skidded rig from No. 1-A, Sur. 265.
Drlg. 2,258 ft.

Intrepid Oil Co.'s (E. R. Thomas) No. 1 Parr, 2,590 ft. S line, 150 ft. E line of Sur. 135, E. H. Valentine Sur.
Drlg. 4,300 ft.

EDWARDS COUNTY

Harry Adams' No. 1 Holman, 1,650 ft. N line, 330 ft. from E line, Sec. 22, C.C.S. D.&R.G.N.G. Sur.
S.D. 602 ft.; showing oil at 520-25 ft. and trying to pull csg.

FAYETTE COUNTY

Clark et al's No. 1 Becker, 750 ft. NW line, 1,300 ft. SW line of 143.74-ac. tract, in A. R. Baker League.
Location.

Ross Fenton's No. 1 Kasper (263-ac.), 3,600 ft from NE line, 1,280 ft. from SW line, of Thos. Green Sur. No. 38.
Location.

FRIO COUNTY

Amerada Pet. Co.'s No. 3 Halff & Oppenheimer, 2,100 ft. from southwesterly NW line, 300 ft. NE line of B. J. Gilman Sur. No. 16.
Drlg. 3,100 ft.

W. T. Shoemaker's No. 1 M. Roche, 150 ft. SW cor. of Carl Wensel Sur. No. 139.
Standing 1,517 ft.

GILLESPIE COUNTY

Ed L. Nixon's No. 3 Lindig, 12,694 ft. S line, 1,333 ft. W line, Maria Josepha Guerra Sur. No. 41.
S.D. in lime 692 ft.

GOLIAD COUNTY

Magnolia Pet. Co.'s No. 1 Albrecht, 660 ft. N line, 330 ft. SW line of J. P. Reid Sur.
Drlg. sticky shale 5,365 ft.

GONZALES COUNTY

Southern Dev. Co.'s (Kyle & Von Rossun) No. 1 W. S. Atkinson, 2,654 ft. from N line, 1,034 ft. from E line of 185-ac. tract in S. Y. Reams Sur.
Building steel derrick.

GUADALUPE COUNTY

J. W. Burrows' No. 1 Beuhring, 1,000 ft. S line, 750 ft. W line of Jos. Clements Sur., SW Darst Creek Field.
Location.

Diamond Half Oil Co.'s No. 1 Hoffman, 660 ft. from NE line, 1,850 ft. from SE line of Wakefield and Stewart Surveys.
Abd. 2,660 ft.

A. D. Locke's No. 1 Lowman, 210 ft. from SE and SW lines of 2,500-ac. tract in C. Campbell Sur.
Moving in spudder.

H. H. Weinert et al's No. 1 Sylle Schmidt, beginning at most southerly S line of E. Irhof 337-ac. tract, NW 700 ft. thence at R/A 300 ft., Wakefield Sur.
Drlg. 2,630 ft.

HIDALGO COUNTY

Clay, Spencer & Hood's No. 1 Brooks & Showers, 330 ft. N and E lines of Lot 4, Blk. 36, Por. 79-80.
Drlg. 2,290 ft.

(Continued on Page 47)

Spurt in Locations in East and East Central Texas, Six Being Reported in as Many Counties

By L. E. BREDBERG

DALLAS, Tex., Feb. 4.—There was a considerable spurt in the staking of locations in the East and East Central Texas districts during the week, six being reported in as many counties, with another ready to be staked immediately. Gulf Production Co. made location for No. 1 M. J. Ross in the Robert Erwin Survey, Anderson County, and is moving rig from its discovery gasser about a mile north. Its No. 1 Davey and Royall, in the M. Rogers Survey, made an estimated 10,000,000 feet of gas after plugging back to 5,059 feet, shutting off salt water. Closed-in pressure on casing was 1,950 pounds while closed-in pressure on tubing registered 1,850 pounds. This discovery, located approximately 7 miles southeast of Palestine, opens the fourth producing area for the county. It showed a greater amount of gas when drilling. It is the only well in the East Texas Basin producing from the sub-Clarksville. Elevation is 572 feet. The Woodbine section, logged at 5,176-5,948 feet, failed to yield oil or gas and the test was drilled to 5,969 feet, into the Georgetown lime, before plugging back to shut off water encountered in the lower stratum, in order to make a gasser out of it. Gas will be used from this discovery to drill the second test, both being on the Camp Hill structure and block held by the company. It is the first discovery in East Texas for 1935.

Rowan & Nichols and Simms Oil Co.'s No. 1 C. V. Gilbreath, in the M. H. Brewer Survey, about a mile northwest of Reklaw, in Cherokee County, appears as probably disappointing at this writing. It is coring below 4,220 feet, showing no oil or gas. Elevation is 310 feet.

The Athens area in Henderson County is to have another test. This area has been given several tests, all of which proved dry, but there still seems to be faith held by some that a pool may be uncovered in the vicinity. Pioneer Exploration Co. is building a derrick on the Gentry tract in the C. M. Walters Survey, 3 miles southwest of the town. LaRue and Sinclair Prairie are interested, Bill McGlothlin geologizing the area and working up the block. Sinclair Prairie Oil Co. purchased 1,000 acres and a half interest in the test; Shell Petroleum Corp., Gulf Production Co., Sun Oil Co. and others taking spreads around it.

Navarro County

Pete Wiggins and others have staked location on the Donoho farm, in the John Cauple Survey, southwest of Corsicana in Navarro County, and McGlothlin and others are to drill a test on a 1,500-acre block near Perry in the southeastern part of the county. This location is to be on the H. A. Barnett 355-acre tract in the Elisha Powers Survey. Syam Oil Co.'s No. 1 Ray, dry hole, is three-quarters of a mile southeast of the new location. That test was reported to have had a showing of oil in the top of the Woodbine.

Hill and McClennan Counties

After abandoning No. 1 Citizens National Bank of Denison wildcat in the N. T. Roberts Survey, about 2½ miles northeast of Mount Calm, in Hill County, at a total depth of 1,286 feet, Humble Oil & Refining Co. immediately staked location for No. 1 Dvosky, in the J. A. Raffer Survey, 3 miles northeast of West, in the McClellan County. The company has a large block in this area and is trying for production paralleling the Fault Line fields to the east. It also staked location for No. 1 Holderman, in the C. Sullivant Survey, 1 mile west of Mount Calm, or on the same block and in the same area as first mentioned test in Hill County.

Titus County

In the northern tier of counties of the district, S. Rotondi and others have made location for No. 1 Lillianstern in the W. H. Crawford Survey, 5 miles northeast of Talco in Titus County, the first test to be drilled in this county in a long time.

There were four wildcats abandoned in the East Central Texas district this week, including the Humble test in Hill County. Ureka Drilling Co. abandoned a shallow test in Falls County at total depth of 1,170 feet and Schweisinger abandoned a shallow one in Limestone County at 1,080 feet. Tuberville and others abandoned No. 1 Ivy at a total depth of 5,002 feet, an interesting test due to being about 1½ miles west of a gas discovery drilled last year by Daniels Oil & Royalty Co. on the P. D. C. Ball lands in the Aguilera Survey, about 2 miles south of Turlington in Freestone County.

The wildcat of J. A. Hoover in No. 1 W. W. McFall, in the S. Garrison Survey, Freestone County, near the Limestone County line, has a derrick up and will soon spud to test the 2,000-acre block.

EAST TEXAS FIELD

There were 76 locations staked in the East Texas Field during the week and 77 tests completed, all but two producers. The two failures were due to junk in the hole causing abandonment of one, the other failing to pick up production at 3,624 feet and being temporarily abandoned. Six of the producers were completed swabbing, one was put on air lift and one was a pumper.

There are now over 15,800 wells in the field, with no evidence of any possible slackening in the drilling rate. The smaller operators are in some cases getting injunctions to drill more tests on their small tracts and the major units or larger producers are drilling inside locations to increase their well density, but having no chance to raise it to the average for the field in the near future, because of the extreme high density of the smaller operators.

Van Field

There were five tests completed in the Van Field. Overton Refining Co. completed another producer northeast of the Carroll district, on the northeast edge of the field, on a tract previously released by a major producer. The most recent completion, Overton Refining Co.'s No. 5 Carter, made 10 bbls. per hour, with a little salt water, on the pump. Total depth is 2,970 feet.

Pure Oil Co. completed a shallow test on the north end of the field at a total depth of 1,236 feet. It pumped 18 bbls. of oil in 21 hours and pumped off. This is in the Nacatoch sand area where independent operators have been successful, in a small way, in drilling in a few shallow wells. Pure Oil Co. also completed two tests in the Woodbine sand area of the field, and Humble Oil & Refining Co. completed one outside of the Van Joint Account, in the Carroll district, a part of the field not carried in the unitized plan in which six companies participate.

COMPLETIONS IN EAST TEXAS

Gregg County

Atlantic Oil Producing Co.'s No. 12 Harris, top pay 3,528 feet, total depth 3,567 feet, initial production 50 bbls. per hour; No. 23 Turner, top pay 3,576 feet, total depth 3,625 feet, initial production 125 bbls. Dillard Oil Co.'s No. 3 Jones, top pay 3,619 feet, total depth 3,656 feet, initial production 135 bbls. Glassell's No. 1 Alexander, top sand 3,598 feet, temporarily abandoned 3,624 feet. Gulf Production Co.'s No. 25 Fishburn, top pay 3,477 feet, total depth 3,507 feet, initial production 67 bbls; No. 10 Fonville, top pay 3,499 feet, total depth 3,559 feet, initial production 90 bbls.

Humble Oil & Refining Co.'s No. 19 Harris, top pay 3,518 feet, total depth 3,580 feet, initial production 88 bbls. Inland Oil Co.'s No. 6-B Fenn, top pay 3,559 feet, total depth 3,640 feet, initial production 27 bbls. in 15 minutes. Kewanee Oil & Gas Co.'s No. 5 Adams (Barton), top pay 3,559 feet, total depth 3,600 feet, initial production 27 bbls. in 15 minutes. Magnolia Petroleum Co.'s No. 7 Tate, top pay 3,431 feet, total depth 3,447 feet, initial production 125 bbls. Phillips' No. 4-A League, top pay 3,609 feet, total depth 3,616 feet, initial production 65 bbls. Rancho Oil Co.'s No. 4 Fenn, top pay 3,588 feet, total depth 3,622 feet, initial production 80 bbls. in 30 minutes. Roeser & Pendleton's No. 3 Smith, top pay 3,522 feet, total depth 3,545 feet, initial production 50 bbls. Selby and Lewis' No. 14-D Snavely heirs, top pay 3,586 feet, total depth 3,591 feet, initial production 35 bbls. in 30 minutes.

Shell Petroleum Corp.'s No. 21 Richey, top pay 3,554 feet, total depth 3,603 feet, initial production 17 bbls. in 15 minutes. Skipper Oil Co.'s No. 2 Snoddy, top pay 3,599 feet, total depth 3,600 feet, initial production 150 bbls. Sutton & Hawkin's No. 10 Whittaker, top pay 3,500 feet, total depth 3,525 feet, initial production 40 bbls. in 20 minutes. Tide Water Oil Co.'s No. 31 Lake DeVernia, top pay 3,527 feet, total depth 3,566 feet, initial production 16 bbls. in 10 minutes through 1-inch choke. Whittington's No. 2 Baptist Church, top pay 3,537 feet, total depth 3,577 feet, initial production 125 bbls. Yount Lee Oil Co.'s No. 7 Lee, top pay 3,591 feet, total depth 3,611 feet, initial production 56 bbls. through eleven-sixteenths-inch choke. Everetts Drilling Co.'s No. 4 Laird, top pay 3,538 feet, total depth 3,605 feet, initial production 55 bbls.

Gulf Production Co.'s No. 40 Brown, top pay 3,530 feet, total depth 3,575 feet, initial production 32 bbls. in 30 minutes; No. 28 Culver, top pay 3,534 feet, total depth 3,576 feet, initial production 70 bbls.; No. 66 Hilburn, top pay 3,518 feet, total depth 3,547 feet, initial production 75 bbls.; No. 16 Muckelroy, top pay 3,560 feet, total depth 3,577 feet, initial production 50 bbls. Humble Oil & Refining Co.'s No. 67-B Laird, top pay 3,562 feet, total depth 3,640 feet, initial production 55 bbls. McWhorter, receiver, No. 3 Jobe, top pay 3,523 feet, total depth 3,556 feet, initial production 60 bbls. in 30 minutes. Magnolia Petroleum Co.'s No. 3 Blackman, top pay 3,615 feet, total depth 3,625 feet, initial production 17 bbls. in 15 minutes. Mullendore & Berry's No. 4 Davis, top pay 3,595 feet, total depth 3,-

East Central Texas Wildcats

Week Ending February 2

ANDERSON COUNTY

Gulf Prod. Co.'s No. 1 M. J. Ross, 1,770 ft. from SW and 1,370 ft. from NW lines of Robt. Erwin Sur. Location.

Gulf Prod. Co.'s No. 1 Dovey & Royall, 330 ft. from NE and NW of 172-ac. tract, M. Rogers Sur. T.D. 5,969 ft.; P.B. to 5,059 ft.; to retest.

J. W. Lutter' No. 1 C. McKee, 2,640 ft. from N line of lease and survey and 330 ft. from W line of McKey 800-ac. tract. Derrick.

Tide Water Oil Co. et al's No. 21-A Wells, 4,079 ft. N and 2,333 ft. W of lease, S. Edmondson Sur. (Trinity test). Drlg. 3,510 ft.

BOWIE COUNTY

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 600 ft. E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River. Rigged up.

CHEROKEE COUNTY

Jacksonville O. & G. Co.'s No. 1 H. D. Henderson, 660 ft. from N and W lines of 40-ac. tract out of Tankersley 164-ac. tract, 5 miles NE of Jacksonville on W side of railroad, J. Pineda Sur. T.D. 752 ft.

Rowan-Nichols Oil Co.'s No. 1 Gilbreath, 460 ft. N and 2,600 ft. from W lines of C. M. Brewer Sur., 1 mile NW of Reklaw, Pecan Gap 3,212-3,545 ft.; drlg. 3,965 ft.

E. M. Thomason et al's No. 1 Addis Estate, 350 ft. S of survey and 150 ft. E of railroad, J. T. Jones Sur., 6 miles NW Alto. S.D. 2,150 ft.

Wilson Stubbs Oil Co.'s No. 1 Rowborts, 450 ft. from S line, 150 ft. from W line of 100-ac. tract, 2 miles SW of Jacksonville, J. D. Wolfin Sur. S.D. 1,553 ft.

ELLIS COUNTY

Beckner-Finley et al's No. 1 Coker, 2,900 varas along S line of grant from river and 1,700 varas N at R/A, R. De La Pena Sur. S.D. 527 ft.

FREESTONE COUNTY

Amerada Pet. Corp.'s No. 1 Burk, 851 ft. S and 191 ft. W of river, E. G. Rector Sur. Material.

Burris' No. 1 R. J. Johnson, NE cor. of a 95.5-ac. tract, W. M. C. Jones Sur. Drlg. 2,705 ft.

GREGG COUNTY

O. T. Clark's No. 1 Williams, 2,100 ft. from S and 2,400 ft. from W of D. Hill Sur., 3 miles NE of Longview. Coring 3,256 ft.

HENDERSON COUNTY

Campbell and Chamberlain's No. 1 R. Ansley, 1,724 ft. W and 300 ft. S of SE cor. of M. Matthews Sur., N. H. T. Thompson Sur. S.D. 894 ft.

Crosby and Pulp's No. 1 M. T. Dobbs, NW cor. of east Dobbs 100-ac. tract, 4 miles E of Malakoff and S of Railroad, George Aldrick Sur. S.D. 4,048 ft.

Pioneer Exploration Co.'s No. 1 Gentry, 300 ft. out of SE cor. of West Gentry tract in C. M. Walters Sur., 3 miles W of Athens. Location.

HILL COUNTY

Humble O. & R. Co.'s No. 1 Holderman, 1,667 ft. from E and 750 ft. from N line of tract in C. Sullivant Sur., 1 mile W of Mt. Calm.

HOPKINS COUNTY

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70-ac. tract, 1 mile SE of Miller Gros. A. Caro Sur. S.D. 1,485 ft.

HUNT COUNTY

Cauble & Thompson's No. 1 Reed, 330 ft. N of northerly NE cor. of C. B. Payne Sur., but in F. Thweatt Sur., 2 miles SE of Greenville. S.D. 1,415 ft.

Shawver et al's No. 1 Phillips, 1,200 ft. E of Winan's No. 1 Phillips, University Lands Sur., 2 miles W of Commerce. Rigged up.

KAUFMAN COUNTY

Germany et al's No. 1 Clark, 951 ft. N and 1,000 ft. W of tract, S. Eden Sur. S.D. 1,728 ft.

Murry & Emerson's No. 1 G. W. Martin, 1,660 ft. from W and 250 ft. from N of 140-ac. tract, from W. L. C. Butler Sur., 2 miles NE of Kemp. S.D. 27 ft.

L. P. Kean's No. 1 J. B. Hunter, R. Sowell Sur., 300 ft. from SW and 150 ft. from SE of 50-ac. tract, 4 miles S of Terrell. S.D. 2,876 ft.; to set csg.

LIMESTONE COUNTY

Chapman's No. 1 Hunt, 200 ft. from N and 350 ft. from W line 34.75-ac. tract, Israel Wood Sur., 3 miles NE of Kosse. Drlg. 2,732 ft.

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607 feet, initial production 30 bbls. in 30 minutes.

Hunter Co.'s No. 9 Spear, top pay 3,667 feet, total depth 3,680 feet, initial production 30 bbls. in 30 minutes. Reserve Development Co.'s No. 4-A Blackman, top pay 3,597 feet, total depth 3,618 feet, initial production 26 bbls. in 30 minutes; Reserve Development Co. and Ward's No. 1-C Blackman, top pay 3,604 feet, total depth 3,623 feet, initial production 30 bbls. in 15 minutes. Sanford's No. 1 Elder, top pay 3,619 feet, total depth 3,631 feet, initial production 100 bbls. Texas Co.'s No. 8 Davis, top pay 3,573 feet, total depth 3,628 feet, initial production 25 bbls. in 30 minutes; No. 12 Walls, top pay 3,671 feet, total depth 3,686 feet, initial production 75 bbls. Tide Water Oil Co.'s No. 10 Beall, top pay 3,656 feet, total depth 3,662 feet, initial production 10 bbls. in 10 minutes. Wellington Oil Co.'s No. 3 Walker, top pay 3,545 feet, total depth 3,560 feet, initial production 80 bbls.

Rusk County

Brown and Tide Water Oil Co.'s No. 7 Hindman, top pay 3,640 feet, total depth 3,655 feet, initial production 75 bbls. Humble Oil & Refining Co.'s No. 63-B Laird, top pay 3,509 feet, total depth 3,575 feet, initial production 28 bbls.; No. 26-B Sexton, top pay 3,598 feet, total depth 3,673 feet, initial production 71 bbls. Long's No. 1 Kinnedy, junked and abandoned 3,672 feet. Magnolia Petroleum Co.'s No. 14 Bradbury, top pay 3,684 feet, total depth 3,692 feet, initial production 12 bbls. in five minutes through 1-inch choke; No. 7 Brox, top pay 3,581 feet, total depth 3,660 feet, initial production 8 bbls. in 15 minutes through 1-inch choke.

Shell Petroleum Co.'s No. 14 Moore, top pay 3,669 feet, total depth 3,679 feet, initial production 20 bbls. in 15 minutes. Turman Oil Co.'s No. 9 Brightwell, top pay 3,600 feet, total depth 3,612 feet, initial production 90 bbls. Ward Oil Corp.'s No. 8 Beall, top pay 3,708 feet, total depth 3,709 feet, initial production 70 bbls. Wheelock & Collins' No. 15 Wells, top pay 3,690 feet, total depth 3,793 feet, initial production 30 bbls. through 1-inch choke. Herin's No. 1 Frederick, top pay 3,512 feet, total depth 3,610 feet, initial production 20 bbls. per hour, pumping; No. 2 Frederick, top pay 3,516 feet, total depth 3,620 feet, initial production 25 bbls. per hour, swabbing. Apple and others' No. 1 Moore, top pay 3,520 feet, total depth 3,604 feet, initial production 12 bbls. in 30 minutes, swabbing.

Atlantic Oil Producing Co.'s No. 8-AA Strickland, top pay 3,582 feet, total depth 3,651 feet, initial production 30 bbls. per hour; No. 6 Thrash, top pay 3,671 feet, total depth 3,680 feet. McMurray and others' No. 1 Heris, top pay 3,710 feet, total depth 3,746 feet, initial production 65 bbls. East Shore Oil Co.'s No. 9 Fox, top pay 3,670 feet, total depth 3,680 feet, initial production 20 bbls. in 20 minutes. Gulf Production Co.'s No. 6-B Keeling, top pay 3,700 feet, total depth 3,742 feet, initial production 50 bbls. Hamilton & Primrose's No. 2 Camp, top pay 3,587 feet, total depth 3,683 feet, initial production 20 bbls. in one and one-half hours. Humble Oil & Refining Co.'s No. 30 Turner, top pay 3,684 feet, total depth 3,762 feet, initial production 30 bbls.; No. 8 Wilson, top pay 3,525 feet, total depth 3,642 feet, initial production 25 bbls. per hour on gas lift. Jenkins Oil Corp.'s No. 20 Jobe, top pay 3,555 feet, total depth 3,630 feet, initial production 140 bbls. in six hours, swabbing; No. 24 Jobe, top pay 3,555 feet, total depth 3,630 feet, initial production 100 bbls. in six hours, swabbing.

Letwin & Lippett's No. 6 Eaton, top pay 3,778 feet, total depth 3,800 feet, initial production 100 bbls. McCutcheon's No. 4 Clay, top pay 3,800 feet, total depth 3,808 feet, initial production 20 bbls. Marathon Oil Co.'s No. 10 Clay heirs, top pay 3,550 feet, total depth 3,673 feet, initial production 20 bbls. per hour, swabbing; No. 14 Graham, top pay 3,655 feet, total depth 3,676 feet, initial production 66 bbls. Sonbar Oil Co.'s No. 10 Finney, top pay 3,638 feet, total depth 3,710 feet, initial production 40 bbls. in 15 minutes. Stanolind Oil & Gas Co.'s No. 3 Coleman, top pay 3,605 feet, total depth 3,645 feet, initial production 20 bbls. in six hours, swabbing. Texas Co.'s No. 14 Pinkston, top pay 3,643 feet, total depth 3,697 feet, initial production 25 bbls. in 30 minutes. Tide Water Oil Co.'s No. 19 Pinkston, top pay 3,720 feet, total depth 3,755 feet, initial production 15 bbls. in 15 minutes through 1-inch choke.

Smith County

Cockburn and Boase's No. 13 Green, top pay 3,780 feet, total depth 3,781 feet, initial production 40 bbls.

Upshur County

E. & D. Oil Co.'s No. 1-B Free, top pay 3,664 feet, total depth 3,685 feet, initial production 70 bbls. Eastern Texas Petroleum Co.'s No. 20 Dunbar, top pay 3,643 feet, total depth 3,669 feet, initial production 30 bbls. in one and one-half hours, swabbing. Metaire Oil Co.'s No. 10 Shepherd, top pay 3,634 feet, total depth 3,647 feet, initial production 30 bbls. in 15 minutes. Shell Petroleum Co.'s No. 16 Landers, top pay 3,664 feet, total depth 3,690 feet, initial production 21 bbls. in 30 minutes. Stanolind and Falcon Oil Co.'s No. 2-C Everett, top pay 3,571 feet, total depth 3,589 feet, initial production 20 bbls. in 12 minutes. Sun Oil Co.'s No. 3 Johnson, top pay 3,643 feet, total depth 3,646 feet, initial production 20 bbls.; No. 6 Raimey, top pay 3,778 feet, total depth 3,795 feet, initial production 30 bbls. Vera Oil Co.'s No. 2 Owen, top pay 3,794 feet, total depth 3,813 feet, initial production 75 bbls.

MISCELLANEOUS COMPLETIONS

Anderson County (Cayuga Field)

Tide Water and Texas Seaboard Oil Co.'s No. 5 Ware, total depth 4,094 feet, initial production 100 bbls. per day.

Falls County

Ureka Drilling Co.'s No. 1 Davis, dry and abandoned at 1,170 feet.

Freestone County

Tuberville and others' No. 1 Ivy, dry and abandoned at 5,002 feet.

Hill County

Humble Oil & Refining Co.'s No. 1 Citizens National Bank of Denison, dry and abandoned at 1,286 feet.

Limestone County

Schweisinger's No. 3 fee, dry and abandoned 1,080 feet. Schultz and others' No. 1 Ward, abandoned location.

Van Zandt (Van Field)

Humble Oil & Refining Co.'s No. 8 Carroll, total depth 2,924 feet, initial production 74 bbls. the first hour through 1-inch choke. Overton Refining Co.'s No. 5 Carter, total depth 2,970 feet, initial production 10 bbls. per hour, with little salt water, pumping.

West Texas Fields

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feet, initial production 40 bbls. of oil and 30 bbls. of water. Fain & McGaha's No. 33 Arnold, top pay 1,198 feet, total depth 1,212 feet, initial production 240 bbls.; No. 34 Arnold, top pay 1,165 feet, total depth 1,172 feet, initial production 230 bbls. Jones' No. 1 Taylor, dry and abandoned 700 feet. King's No. 1 Andrews, dry and abandoned 925 feet. Lanfair Brothers' No. 3 Bell, top pay 930 feet, total depth 938 feet, initial production 25 bbls. of oil and 5 bbls. of water. Maro Oil Co.'s No. 1 Ward Brothers, dry and abandoned 1,020 feet. Maxon and Panhandle Refining Co.'s No. 31-B Green, top pay 1,093 feet, total depth 1,100 feet, initial production 35 bbls. Pace's No. 19 Abercrombie, top pay 1,192 feet, total depth 1,221 feet, initial production 2 bbls. per day. Perkins and Cullum's No. 131 Falls County, top pay 1,176 feet, total depth 1,194 feet, initial production 150 bbls.; No. 133 Falls County, top pay 1,177 feet, total depth 1,195 feet, initial production 200 bbls. Petroleum Producers Co.'s No. 11 Harmonson, top pay 952 feet, total depth 974 feet, initial production 190 bbls.; No. 1 Seybold, dry and abandoned 1,333 feet.

Wichita County

Burns' No. 3 Allen and Kemp, top pay 460 feet, total depth 468 feet, initial production 10 bbls.; No. 4 Allen and Kemp, top pay 463 feet, total depth 469 feet, initial production 12 bbls. Golding & Cochran's No. 13-A Waggoner Brothers, dry and abandoned 1,590 feet. Parks' No. 1 Burnside, dry and abandoned 1,260 feet. Texas Co.'s No. 15 Allen and Kemp, top pay 458 feet, total depth 466 feet, initial production 15 bbls.

Young County

Bridwell Oil Co.'s No. 1 Christian, dry and abandoned 817 feet. Gilmore and others' No. 2 Stewart, top pay 513 feet, total depth 519 feet, initial production 10 bbls. of oil and 10 bbls. of water per day. Humble Oil & Refining Co.'s No. 1 Castleman, dry and abandoned 1,301 feet. King and others' No. 1 Edwards, dry and abandoned 967 feet. Rathke Oil Co.'s No. 5 Graham, top pay 904 feet, total depth 911 feet, initial production 25 bbls. Schmidt's No. 2 Andrews, top pay 896 feet, total depth 910 feet, initial production 20 bbls. Stilley's No. 1 Perkins, top pay 739 feet, total depth 743 feet, initial production 175 bbls. Warner's No. 1 Newman, dry and abandoned 549 feet. Wolfe's No. 1 Dailey, dry and abandoned 629 feet.

COMPLETIONS IN PANHANDLE

Gray County

Danciger Oil & Refining Co.'s No. 5 Barrett, top pay 3,218 feet, total depth 3,312 feet, shot 230 quarts from 3,237-97 feet, initial production 808 bbls. pumping. Dyke Oil Co.'s No. 3 Noel, top pay 3,230 feet, total depth 3,280 feet, initial production 339 bbls. pumping. Gulf Production Co.'s No. 7 Thompson, top pay 3,205 feet, total depth 3,275 feet, shot 380 quarts from 3,177-3,275 feet, initial production 407 bbls. pumping. Hoffman Oil Co.'s No. 1 Saunders, top pay 2,941 feet, total depth 2,988 feet, shot 140 quarts from 2,941-80 feet, initial production 20 bbls. Skelly Oil Co.'s No. 18 Schaffer, top pay 3,100 feet, total depth 3,275 feet, shot 450 quarts from 3,100-3,275 feet, initial production 206 bbls. per day pumping; No. 12-A Webb, total depth 2,640 feet, shot 120 quarts from 2,476-2,513 feet, acidized, initial production 20 bbls. Texas Co.'s No. 1-C Taylor, total depth 3,006 feet, initial production 223 bbls. per day.

Hutchinson County

Phillips Petroleum Co.'s No. 3 Lombard, top pay 3,007 feet, total depth 3,039 feet, shot 140 quarts from 3,000-37 feet, initial production 107 bbls. pumping. Stanolind Oil & Gas Co.'s No. 5 Moore and Langdon, top pay 3,020 feet, total depth 3,100 feet, shot 230 quarts from 3,005-97 feet, initial rproduction 278 bbls. per day pumping; No. 3-A Pitcher, top pay 3,030 feet, total depth 3,110 feet, shot 300 quarts from 2,990-3,108 feet, initial production 112 bbls. per day. Harry Stekoll Oil Producer's No. 4-A Canadian-Whittenburg, top pay 2,920 feet, total depth 2,977 feet, shot 100 quarts from 2,917-77 feet, initial production 238 bbls. per day pumping; No. 4-D Whittenburg, top pay 3,000 feet, total depth 3,065 feet, shot 100 quarts from 3,000-27 feet and 3,045-65 feet, initial production 243 bbls. pumping.

Wheeler County

Alma Oil Co.'s No. 9 Johnson, top pay 2,440 feet, total depth 2,467 feet, initial production 138 bbls. Champlin Oil & Refining Co.'s No. 6 Williams, top pay 2,490 feet, total depth 2,550 feet, initial production 986 bbls. per day.

RANGER DISTRICT COMPLETIONS

Brown County

Mook Texas Oil Co. and Gunn Production Co.'s No. 1 Martin, dry at 1,638 feet. Bruce's No. 1 Geddas, total depth 1,603 feet, initial production 1,000,000 feet of gas.

Shackelford County

Charter Oil Co.'s No. 6-A Morris & Buie, total depth 1,632 feet, initial production 15 bbls. Dobbs Oil Co.'s No. 1 Smith, dry and abandoned at 1,100 feet. Frontier Production Co.'s No. 2 Nail, total depth 1,365 feet, initial production 10 bbls. per day. Gilman & McMurry's No. 12 Jeter, total depth 635 feet, initial production 1,000,000 feet of gas. Grisham & Hunter's No. 5 Ward, total depth 2,128 feet, plugged back to 2,124 feet, initial production 15 bbls. of oil per day. Texas Consolidated Oil Co. and Jones & Stasney's No. 1 Baker, dry and abandoned at 1,912 feet.

Throckmorton County

Boardman's No. 1 Davis, dry and abandoned at 1,505 feet. Falls Production Co.'s No. 10 Graham, dry and abandoned at 3,950 feet.

West Texas Wildcats

(Continued from Page 43)

Harrison et al's No. 3 Addis, 1,650 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
S.D. 4,058 ft.

International Pet. Corp.'s No. 1 Cowden, 660 ft. from S and E. Sec. 25, Blk. 44, Twp. 2s. T.&P. Sur.
T.D. 1,345 ft.; underreaming csg.

Landreth Prod. Co.'s No. 1 Clarence Scherbauer, 660 ft. from S and E lines of Sec. 20, Blk. 44, Twp. 1n, T.&P. Sur.
T.D. 4,236 ft.; plugged back to 4,186 ft.; S.D.

Penrose et al's No. 1 Kloh & Rumsey, 2,310 ft. from S and E, Sec. 31, Blk. 45, Twp. 1s, T.&P. Sur.
Drlg. 175 ft.

Phillips Pet. Co.'s No. 1 Scharbauer, 990 ft. from S and 330 ft. from E, Sec. 16, Blk. B-16.
S.D. 1,009 ft.

Shell Pet. Corp.'s No. 1 Connell, 1,980 ft. from N and 660 ft. from E, Sec. 12, Blk. B-16, P.S.L. Sur.
T.D. 3,664 ft.; cleaning out.

EDWARDS COUNTY

Harry Adams' No. 1 Holman, 1,650 ft. from N and 330 ft. from E, Sec. 22, C.C.S.D. &R.G.N.G. Sur.
Show oil 520-35 ft.; T.D. 602 ft.

EL PASO COUNTY

Mesa Oil Co.'s No. 1 Coronado Valley.
S.D. 1,415 ft.

FISHER COUNTY

Merry Bros. and Perrini's No. 1 Howard. 1,320 ft. from N and 660 ft. from E, Sec. 18½, Blk. 2, H.&T.C. Sur.
Drlg. 3,435 ft.

Roeser & Pendleton's No. 2 Hill, 2,316 ft. from N and 330 ft. from E, Sec. 203, B.B.B.&C. Sur.
T.D. 3,123 ft.; set csg.

GLASSCOCK COUNTY

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 22, Blk. 34, Twp. 2s, T.&P. Sur.
Drlg. 3,676 ft.

HOWARD COUNTY

C. Henson et al's No. 1 B. Scott, 330 ft. from N and 1,650 ft. from E, Sec. 93, Blk. 29, T.&P. Sur.
T.D. 718 ft.; cleaning out.

Slagel's No. 1 Foster, 990 ft. from S and 330 ft. from W, Sec. 43, Blk. 29.
Shut down.

JEFF DAVIS COUNTY

C. M. Joiner's No. 1 Jones & Coffield, 770 ft. from N and 1,323 ft. from E, Sec. 3, Blk. 3, H.&T.C. Sur.
Drlg. 300 ft.

JONES COUNTY

Byram et al's No. 1 McWright, 200 ft. from N and 660 ft. from W of SW Sec. 5, Blk. 15, Twp. 1s, T.&P. Sur.
T.D. 1,950 ft.; est. 50-bbl. well; T.P. 1,926 ft.

Campbell et al's No. 1 Rowell, in E half of W half, Sec. 6, T.&P. Sur.
Location.

Campbell et al's No. 1 Enevill, 1,400 ft. from N and 270 ft. from W, Sec. 2, M.E.&P. Sur., ¼ mile S of Anson.
Fishing 1,777 ft.

Cal-Tex Oil Co.'s No. 1 Smith, 1,400 ft. from S and 2,000 ft. from E, Sec. 25, Blk. 19, T.&P. Sur.
S.D. 1,120 ft.

Dr. C. E. Johnson's No. 1 Young, 1,800 ft from N and 750 ft. from W of SE 200 acres of B. Travenio Sur.
S.D. 1,970 ft.

McKenzie & Bland's No. 1 First Nat'l Bank of Anson, 200 ft. from S and E. Sec. 53, D.&S.A. Sur.
Spudded.

Owen et al's No. 1 Johnson & Dunwoody, 3,750 ft. from S and 330 ft. from W, Sec. 6, Blk. 17, T.&P. Sur.
Spudded and S.D.

Richards et al's No. 1 Ransom, 200 ft. from N and E. Sec. 244, B. M. Clopton Sur.
S.D. 750 ft.

Bill Rhodes' No. 1 Wood, 300 ft. from S and E, Sec. 2, Blk. 2, T.&N.O. Sur.
Drlg. 1,460 ft.

Texas Inland Oil Co.'s No. 1-A Sayles, 85 ft. W and 160 ft. N of NW cor. of Lot 1, but in Lot 7, Blk. 20, T.&P. Sur.
Drlg. 1,458 ft.

LOVING COUNTY

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft.

from N and 1,650 ft. from W, Sec. 12, Blk. 37, Twp. 1, T.&P. Sur.
S.D. 2,030 ft.

LYNN COUNTY

Hart Oil Co.'s No. 1 Edwards, 330 ft. from N and 200 ft. from W of SE. Sec. 39, L.&S.V. Sur.
Drlg. 1,365 ft.

MARTIN COUNTY

Wright & Scott's No. 1 Flannigan, 330 ft. N and E, Sec. 22, Blk. 37, Twp. 1s, T.&P. Sur.
Spudded and S.D.

MITCHELL COUNTY

Harry Adams' No. 1 Mackey, 1,980 ft. from N and 660 ft. from W, Sec. 13, Blk. 29, Twp. 1n, T.&P. Sur.
Drlg. 2,100 ft.

Sawtell & Gruber's No. 1 Morrison
T.D. 763 ft.; ran pipe.

McCULLOCH COUNTY

Goggins' No. 1 Craven Estate, 1,390 ft. from S and 2,480 ft. from W, Gus Dreiss Sur.
Drlg. 150 ft.

Hanea et al's No. 1 Cox, 450 ft. from S and 150 ft. from E, Davis & Pope Sur.
Drlg. 695 ft.

PECOS COUNTY

Gulf Prod. Co.'s No. 4 White & Baker, 2,310 ft. from N and 330 ft. from E, Sec. 46, Blk. Z, T.C. Sur.
Drlg. 255 ft.

Messenger's No. 1 Dr. Sibley, 4,930 ft. from S and 990 ft. from W, Sec. 6, Blk. 9, H.&G.N. Sur.
Location.

Shell Pet. Corp.'s No. 1-A Carlson-University, 660 ft. from N and E, Sec. 36, Blk. 16.
Fishing 1,992 ft.

Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 27, Blk. 40, Twp. 9, T.&P. Sur.
Drlg. 1,555 ft.

REAGAN COUNTY

Dobbs' No. 1 Friend, 2,310 ft. from S and 660 ft. from W of Blk. 3, Wm. Allen Sur., 3 or 4 miles S of Big Lake.
Drlg. 520 ft.

Skelly Oil Co.'s No. 1-D H. S. Grayson, 1,980 ft. from N line and 660 ft. from W line of Sec. 33, Blk. 3, University Land Sur.
Drlg. up core bbl. cutters at 9,430 ft.; top Simpson 9,400 ft.

REEVES COUNTY

J. E. Cunningham's No. 1 Altman, 2,310 ft. from N line and 1,980 ft. from E line of Sec. 1, C. C. Wyatt Sur.
S.D. 3,672 ft.

Herbert Oil Co.'s No. 1 Williams & Walker, 5,280 ft. from S and 1,320 ft. from E, Sec. 17, Blk. 6, H.&G.N. Sur.
Material.

RUNNELS COUNTY

Dennis et al's No. 1 Wash, 550 ft. from N and 550 ft. from E of W half, Sec. 123, E.T.R.R. Sur.
Spudded and S.D.

Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 3,475 ft. from W line of survey, Willett Holmes Sur. No 106.
S.D. 2,507 ft.

R. Wells' No. 1 James, 396 ft. from N and 330 ft. from E of James tract in Sec. 14, D. Diaz Sur.
S.D. 1,100 ft.

SCHLEICHER COUNTY

John M. Cooper et al's No. 1 Bert Page 1,290 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur.
5,987 ft.; running 2½-in. tubing with 2 packers and will test.

W. C. Proctor et al's No. 1 Judkins & Spencer, 1,920 ft. from S and W of W. W. Russell grant.
Rigged up; standard tools.

SCURRY COUNTY

Coffield & Guthrie's No. 1 Holliday, 2,310 ft. from N and 330 ft. from W, Sec. 120 Blk. 97, H.&T.C. Sur.
S.D. 2,967 ft.

McLaughlin's No. 1 Allen, 1,331 ft. from N and 1,338 ft. from E, Sec. 295, Blk. 97.
S.D. 485 ft.

STERLING COUNTY

Merry Bros. & Perrini's No. 1 Standaberry 1,980 ft. from N and E, Sec. 20, Blk. 30, W.&N.W. Sur.
Drlg. 875 ft.

STONEWALL COUNTY

Merry Bros. and Perrini et al's No. 1 Williams, C SW of SW Sec. 4, Blk. C, A B &M. Sur.
S.D. 3,000 ft.

SUTTON COUNTY

Texas et al's No. 1 Mower, 1,980 ft. from S and W of Sec. 39, Blk. 5, T.W.&N.G. Sur.
S.D. 3,250 ft.

TAYLOR COUNTY

Dunnigan Bros. et al's No. 3 Hunter, 225 ft. from S and 750 ft. from W, Sub. 14, Willis Sur.
T.D. 2,350 ft.; testing water shutoff.

TERRELL COUNTY

W. A. Sudderth's No. 1 Phelps, 2,157 ft. from N line and 2,482 ft. from the W line of Sec. 5, Blk. 4-A, G. W. Turley Sur.
S.D. 5,635 ft.

UPTON COUNTY

Baldridge Oil Co.'s No. 1 S. Peck, 440 ft. from S and E, Sec. 29, Blk. 41, Twp. 4s, T.&P. Sur.
Material.

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur.
Drlg. 11,061 ft.

Humble Oil & Ref. Co.'s No. 1 Pollock, C of NW, Sec. 4, Blk. M.
S.D. 335 ft.; rigged up rotary.

King Mountain Pet. Co.'s No. 1 Sherk, 330 ft. from S and W, Sec. 23, Blk. 1, M.K.&T. Sur.
Drlg. 927 ft.

Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,900 ft. from E, Sec. 4, G.C.&S.F. Sur.
S.D. 3,040 ft.; 1,700 ft. oil in hole.

WARD COUNTY

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 27, Blk. 34, H.&T.C. Sur.
Drlg. 1,836 ft.

Atlantic Oil Prod. Co.'s No. 1 Monroe, 566 ft. SW and 350 ft. SE of E cor. of J. C. Russell Sur. No. 3, but in Sec. 2, J. V. Border's Sur.
Rigged up rotary.

Bradford et al's No. 1 E. R. Allen, 660 ft. from NW line and 551 ft. from NE line, Sec. 11, H.&T.C. Sur.
S.D. 760 ft.

Caprito's No. 1 Hardage & Wilson, 2,310 ft. from NE and 990 ft. from SE, Sec. 11, Blk. 34, H.&T.C. Sur.
Material.

Cook Drlg. Co.'s No. 1 Wood, 330 ft. from NW and SW, Sec. 5, W. F. Stewart Sur.
T.D. 2,548 ft.

Gulf Prod. Co.'s No. 52 O'Brien.
Drlg. 2,320 ft.

Gulf Prod. Co.'s No. 55 O'Brien, 1,650 ft. N and 330 ft. from E, Sec. 18, Blk. F.
Derrick.

Postellio & Caprito's No. 1 Purcell, 330 ft. from NE and 990 ft. from NW, Sec. 17, Blk. 34, H.&T.C. Sur.
Fishing 2,775 ft.

Rector Oil Co.'s No. 1 Monroe, 660 ft. from SE and NE, Sec. 2, Blk. 1, W.&N.W. Sur.
Drlg. 2,035 ft.

Sageland Oil Corp.'s No. 2 Pure-Bennett 1,650 ft. from NW and 2,310 ft. from SW S.D. 220 ft.

West Texas O. & R. Co.'s No. 1-C University, 330 ft. from N and E, Sec. 6, Blk. 16.
Drlg. 954 ft.

WINKLER COUNTY

Barnsdall Oil Co.'s No. 1 Brown & Aultman, 2,310 ft. from N and W, Sec. 6, Blk. 5, P.S.L. Sur.
Machine.

Gulf Prod. Co.'s No. 1 Wight, 330 ft. from S and E, Sec. 20, Blk. 40, P.S.L. Sur.
Drlg. 2,780 ft.

Harry Adams' No. 2 Scarborough, 990 ft. from N line and 990 ft. from W line, Sec. 2, Blk. 77, P.S.L. Sur.
Location.

Humble Oil & Ref. Co.'s No. 2-A Walton, 660 ft. from S and W, Sec. 48, Blk. 26.
Location.

Jeffries et al's No. 1 Brown & Altman, 2,310 ft. from S and W, Sec. 6, Blk. B-5.
T.D. 3,098 ft.; drlg. by tools.

Dr. Jeffries et al's No. 1 Underwood, 330 ft. from S and 2,310 ft. from E, Sec. 26, Blk. B-3.
S.D. 800 ft.

J. C. Maxwell's No. 1 Clapp, 2,310 ft. from N and 330 ft. from E, Sec. 27, Blk. 26, P.S.L. Sur.
Drlg. 3,464 ft.; sulphur water 3,425-30 ft.

Maxwell's No. 1 Daugherty.
T.D. 2,788 ft.; set csg.

R. S. Mathews et al's No. 1 Evans, 1,320 ft. from N line and 1,320 ft. from W line Sec. 46, Blk. 78, P.S.L. Sur.
S.D. 110 ft.

Mid-Continent Pet. Corp.'s No. 2 Howe, 1,650 ft. from N and 330 ft. from W, Sec. 13, Blk. 26.
Spudded.

Richardson's No. 1 Walton, 1,010 ft. from S and 330 ft. from W, Sec. 1, Blk. B-3.
Drlg. 480 ft.

Sid Richardson's No. 1 Hill, 1,980 ft. from E line, 660 ft. from S line, Sec. 18, Blk B-11, P.S.L. Sur.
Drlg. 3,850 ft.

Sayre Oil Co.'s No. 1 Lock, 330 ft. from S and E, Sec. 2, Blk. 26, P.S.L. Sur.
S.D. 2,715 ft.

Sayre Oil Co.'s No. 2 Howe, 330 ft. from N and W, Sec. 12, Blk. 26, P.S.L. Sur.
Location.

Skelly Oil Co.'s No. 2 Halley, 1,320 ft. from N and 2,200 ft. from E, Sec. 25, Blk. B-11 P.S.L. Sur.
T.P. 2,850 ft.; T.D. 3,002 ft.; est. 100-bbl. well.

Sinclair Prairie Oil Co.'s No. 2 Cummins 330 ft. from N and E, Sec. 11, Blk. 26 P.S.L. Sur.
Fishing 2,855 ft.

Sun Oil Co.'s No. 1 Halley, 2,200 ft. from N and 440 ft. from E, Sec. 24, Blk. B-12, P.S.L. Sur.
Material.

East Central Texas Wildcats

(Continued from Page 45)

C. F. Carter's No. 1 Dean, 660 ft. from SE and 330 ft. from SW lines of 75-ac. tract, P. Valella Sur., 3½ miles SW of Mexia.
S.D. 1,717 ft.

Crawford's No. 1 Vol DeLong.
S.D. 2,807 ft.; claimed saturation with showing of oil.

Doughtry et al's No. 1 S. Welch, 150 ft from NW and 900 ft. from NE of 77.64-acre tract in A. Varilia Sur., 4 miles W of Groesbeck.
Drlg. 1,145 ft.

V. V. Waite's No. 1 Barrow, 650 ft. from S and 950 ft. from E line of 320-ac. tract, W. G. McKenzie Sur., 3½ miles NW of Thornton.
Derrick.

McLENNAN COUNTY

Humble O. & R. Co.'s No. 1 Dvosky, 1,400 ft. from E and 330 ft. from S line, J. A. Roffee Sur., 3 miles NE of West.
Location.

NACOGDOCHES COUNTY

Murray Oil Co.'s No. 1 C. B. Watkins, 150 ft. from N line and 330 ft. from NW lines of 160-ac. tract, 3 miles S of Caro, H. Y. Bailey Sur.
S.D. 3,925 ft.

Wells et al's No. 1 Z. Ramblin, 990 ft. N and 330 ft. W of SE cor. of tract and survey, J. Simpson Sur., 12 miles NE of Nacogdoches.
S.D. 135 ft.

NAVARRO COUNTY

Bennett Brothers' No. 1 T. E. Stewart, 150 ft. from NE line of lease, 10 miles SW of Corsicana, Wm. R. Bowen Sur.
S.D. 1,136 ft.

R. B. Codding et al's No. 1 Lois Kent, 450 ft. from S line and center of N and S lines of lease, 3 miles NE of Chatfield, C. B. Emmons Sur.
S.D. 1,550 ft.

W. J. Keeling et al's No. 1 J. F. Rushing 484 ft. from N line and 150 ft. from W line of 184-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
S.D. 2,880 ft.

McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-acre tract, 1 mile W of Dawson, William Moss Sur.
S.D. 625 ft.

McGlothlin's No. 1 Dobbin, 150 ft. W and midway from N and S lines of 138-ac. tract, E. Lowry Sur., 2 miles N of Corsicana.
T.D. 4,075 ft.; to test.

Wiggins et al's No. 1 Donoho, 450 ft. from N and 1,101 ft. from E lines in John Couple Sur., SW of Corsicana.
Derrick.

Syam Oil Co.'s No. 1 Love, 330 ft. out of SE cor. of J. L. Strother Sur.
S.D. 4,030 ft.

RED RIVER COUNTY

Abercrombie & Harrison's No. 1 Roberts, 4,500 ft. from E and 500 ft. from N line of John Ware Sur., 8 miles N of Clarksville.
T.D. 1,369 ft.; reaming to bottom.

Dinger's No. 1 W. T. Norris, 1,999 ft. from S and 1,900 ft. from W of 400-ac. tract, Jos. Guest Sur., 1 mile S of Detroit.
Derrick.

RUSK COUNTY

George Hudson et al's No. 3 Jeff Phillips 150 ft. from N line of survey and 700 ft. from W line of 100-ac. tract, 4 miles SE of Minder N. Villaria Sur.
S.D. 3,673 ft.

Ben Lamb's No. 1 H. Leath, 330 ft. out of NW cor. of 185-ac. tract in I. J. Dooley Coring 3,650 ft.; D.S. test showed only mud.

Richardson's No. 1 Wood.
Derrick.

SMITH COUNTY

Deck et al's No. 1 Dendall, 330 ft. from S and W of 55-ac. tract, J. Williams Sur., 3 miles E of Van Field.
S.D. 1,100 ft.

TITUS COUNTY

S. Rotondi's No. 1 Lillianstun, 1,200 ft. E from NW cor. of J. Bodt Sur. and 330 ft. N, but in W. H. Crawford Sur., 5 miles NE of Talco.
Derrick.

VAN ZANDT COUNTY

Delcambre et al's No. 2 Crim, 400 ft. from S and 150 from E lines, Nacogdoches Co. School Lands.
T.D. 1,327 ft.

Pet. P. L. & Storage Co.'s No. 4 Mrs. S. McGee, 450 ft. S of N line and 155 ft. E of W line of 53.4-ac. tract, Blk. 20.
S.D. 1,268 ft.

Florence Oil Co.'s No. 2 Sanger, 316 ft. W of SE cor. and 151 ft. S of S line of Pure-Blackstock lease, John Walling Sur.
Rig.

Gillum and Allen et al's No. 1 A. T. Bass 150 ft. from W line and 150 ft. from N line of 10-ac. tract, William Hart Sur.
S.D. 1,700 ft.

Green and Winn's No. 1 Eaton, 330 ft. out of most westerly SW cor. of J. Wilson Sur., 2 miles SE of Martin.
Location.

J. Beren et al's No. 1 Bryant, 453 ft. N of same operator's dry hole, Nacogdoches County School Land Sur.
S.D. 1,325 ft.

Lane-Tex Co.'s No. 1 Listenbee, 150 ft. N and E of tract, Wm. Daniel Sur.
S.D. 1,279 ft.

Martin-Evans' No. 2 Palmer, 544 ft. from S and 686 ft. from E of 69.5-ac. tract, Nacogdoches County School Land.
Drlg. 1,012 ft.

Miller et al's No. 1 J. M. Palmer, 150 ft. from S and E lines of 69-ac. tract, Nacogdoches County School Land Sur.
Fishing 1,152 ft.

Peden and Olson's No. 1 J. M. Palmer, 300 S of No. 2 and 140 ft. from W line of tract, J. Goodman Sur.
S.D. 1,288 ft.

M. Rouch et al's No. 1 Bearden & Palmer 150 ft. out of SE cor. of 61-ac. tract, Nacogdoches C.S.L.
S.D. 1,237 ft.

Wadley's No. 1 Carnes, 500 varas N and 1,000 varas E of most northerly SE cor. of 588-ac. tract, S.P. Sur.
Coring 4,215 ft.

WOOD COUNTY

Bryant & Spear's No. 1 Consumer Lignite Co., 150 ft. out of most westerly NE cor. of J. F. McMahon Sur., SE of Alba.
Drlg. 1,636 ft.

Southwest Texas Wildcats

(Continued from Page 44)

Carpenter & Vernon's No. 1 G.L.&C.C., 330 ft. from E line of Porcion 100, 2,350 ft. S of Highway No. 4.
Drlg. 1,750 ft.

Hardy & Lynch's No. 1 Southland Dev. Co., 330 ft. N and W lines, Blk. 14, Por. 17.
Spudded and S.D.

Harrison, Medline et al's No. 1 G. L. & C. Co., 950 ft. W line, Por. 42, 330 ft. N of Old Military Road, in Por. 43.
Drlg. 2,500 ft.

Kingwood Oil Co.'s No. 1 Daskom, 215 ft. W line, 218 ft. N line of Lot A-23, Blk 49, Porcion 41.
Drlg. 3,575 ft.

Kingwood Oil Co.'s No. 1 Doughty, 1,314 ft. from N line, 3,750 ft. from W line of Tract 90, in San Salvador del Tule grant.
S.D. 1,553 ft.

Maxwell-Young's No. 2 King, 175 ft. N and E lines of Lot 2, Blk. 11.
T.D. 875 ft.; to D.D.

Union Sulphur Co.'s No. 1 John C. Engleman, 400 ft. S and W lines, Lot 8, Blk. 79, Mestenas tract.
Abd. 7,505 ft.

Downey & Morton's No. 1 Daskom, 450 ft. from E line, 55 ft. from S line of Blk. 34, Por. 45.
Standing 2,310 ft.

Gato Oil Co.'s No. 1 Brocks & Showers, 500 ft. W line, 400 ft. N line of Tract 8, Blk. 26, Por. 79.
Drlg. 4,600 ft.

JIM HOGG COUNTY

Miller & Pippin's No. 1 Yeager, 527 ft. S line, 150 ft. E line of Blk. 6, Sur. 20.
Drlg. 849 ft.

G. H. Von Rossun's (John D. Norwood) No. 1 C. W. Hellen, 330 ft. N and W lines, Sur. 48.
T.D. 1,338 ft.; S.D. for orders.

J. M. Shugart's No. 1 R. Holbien, 100 ft. from E line, 330 ft. from S line of Blk. 55, Sur. 17 of Holbien Subd., of Las Animas grant.
S.D. 490 ft.

Texas Co.'s No. 1 Guiterrez, 2,310 ft S line, 330 ft. W line of Sur. 164.
Abd. 3,361 ft.

Texas Co.'s No. 1 C. W. Hellen, 5,742 ft. S line, 6,562 ft. E line of Sur. 160.
Rigging up.

JIM WELLS COUNTY

Maer & Shira's No. 1 Schaeffer, 1,320 ft. E of NW cor. center of Blk. 15, of subdivision of ranch.
Moving in material.

KARNES COUNTY

American Liberty Oil Co.'s No. 1 Von Roeder, 330 ft. from NE and SE lines of 204-ac. tract in Johnson Sur.
T.D. 3,374 ft.; I.P. 40,000,000 ft. of gas per day.

R. G. Tonkin's No. 1 Miss Olive Henke, 2,640 ft. from SW cor. N along W line, thence at R/A 330 ft., Seguin grant.
Washing down 2,672 ft.

R. W. Norton's No. 2 Choate, 1,020 ft. from N cor. of 320-ac. tract, 330 ft. SW of NE line, A. Storey Sur.
Drlg. below surface csg.

KERR COUNTY

Meteor Oil Co.'s (Edminton & Walker) No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439, of the H.E.&W.T. Sur.
Drlg. lime 800 ft.

Jeff Love and Eastland Oil Co.'s No. 5-B Jeff Love, 1,500 ft. SE of No. 1 and 1,586 ft. from SE cor. and 300 ft. from N line of Sec. 1,591.
T.D. 3,530 ft.; U.R. at 3,075 ft.

LEE COUNTY

Humble O. & R. Co.'s No. 1 J. Simmons, 289-ac., 3,650 ft. from S line, 2,510 ft. from E line, Hunter Sur.
Drlg. 3,422 ft.

Jas. E. Pederson's No. 1 Turner, 1,866 ft from N line, 150 ft. from E line of tract, David Hudson Sur.
Drlg. 5,510 ft.

Stowe & Scharlach's No. 1 Otto.
T.D. 1,700 ft.; standing; moving in new boiler to deepen to Edwards lime.

LIVE OAK COUNTY

Arthur, Brunson & Hall's No. 1 W. P. Howard, 150 ft. from W line, 2,400 ft. from N line of 200-ac. tract, in B. Ayers Sur.
Drlg. 325 ft.

Baugh & McMillan's No. 1 Walton & Campbell, 1,500 ft. NE line and SE line of D. R. Fant Sur.
Drlg. 1,209 ft.

Berry & Hayes' No. 1 C. L. Terrell, 1,600 ft. N line, 330 ft. E line of Henry Sur.
Spudded.

California Co.'s No. 1 Blankenship, 466 ft. from SW line, 2,000 ft. from SE line, A. A. Dunn Sur.
Spudded.

Henderson Coquat et al's No. 1 Little, 1,320 ft. NE of S cor. of M. M. Shipp Sur., and 330 ft. N of S line.
Abd. 5,314 ft.

Luling O. & G. Co.'s No. 1 Rex, C of SW¼ of G.H.&H. Sur., Abst. 197, 3 miles S of Mileska.
Rigging up.

Lee McCoy et al's No. 1 R. Murry, 1,000 ft. from S line, 4,900 ft. from E line of Hefferson Sur.
S.D. 410 ft.; showing gas.

MAVERICK COUNTY

Escher & Andrews' No. 1 Mathews, NW cor. of B. C. Flowers Sur.
S.D. 480 ft.

McMULLEN COUNTY

Points et al's No. 1 Fahler, 2,000 ft. from S line, 2,500 ft. from W line of 1,000-ac. tract, Pittuck Sur.
S.D. 60 ft.

Texas Pet. Co.'s No. 1 Two Rivers ranch.
Drlg. 300 ft.

MEDINA COUNTY

Scoggins & Sanders' No. 1 L. W. Burrell, 150 ft. from E line, 1,750 ft. from N line of M. E. Gage Sur. 396.
S.D. 1,880 ft.

MILAM COUNTY

C. F. Drake et al's No. 1 Standard Coal Co., 970 ft. SW line, 1,700 ft. SE line of G. L. Johnson Sur.
Moving in heavier rig; T.D. 1,575 ft.

Frank W. Kellar, Inc.'s No. 1 A. L. Lucas, 1,980 ft. from N line, 400 ft. from E line of 178-ac. tract, J. Real Sur.
Drlg. 1,500 ft.

Second Natl. Bank's No. 1 B. F. Ward, 150 ft. SW line, 950 ft. SE line of 100-ac. tract, L. Taylor Sur.
Drlg. hard lime 3,219 ft.

NUECES COUNTY

Magnolia Pet. Co.'s No. 1 S. Page, 190.3 ft. from W line, 196 ft. from N line of 75-ac. tract in Kinney Sur. No. 586, Sec. 8.
Spudded.

REAL COUNTY

H. J. Heartwell et al's No. 2 L. J. Maby,

694 ft. from W line and 2,153 ft. from S line of A.B.&M. Sur. No. 175.
T.D. 2,837 ft.; standing.

SAN PATRICIO COUNTY

Allied Minerals' No. 1-A Ramsey, 446 ft. E. 330 ft. N of SW cor. of the North B Giddings Sur. on a 1,000-ac. tract.
Sandy shale 2,642 ft.; moving in heavier rig; S.D.

Lonnie Glasscock's No. 1 M. F. Timmons, 330 ft. out of SE cor. of Blk. 37, San Patricio townsite.
No report.

Stanolind O. & G. Co.'s No. 1 J. J. McMillan (Whitehurst), 165 ft. from W line, 990 ft. from N line of Lot 12, Fulton Pasture Subd., Fitzsimmons League.
Rigging up to spud.

STARR COUNTY

Armstrong, Emanuel & Adams' No. 1 S.C.C.C., 330 ft. from S and E lines of Blk. 57, Porcion 88-89.
Testing sand 2,558 ft.

C. R. Horah's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E lines of Sec. 6 (NE part of county).
S.D. 2,687 ft.

Conway & Emanuel's No. 1 S.C.C.C., Blk. 62, Por. 35.
Drig. 2,409 ft.

John H. Clopton's No. 1 Roos, 13,155 ft. N of Highway 4, along E line of Por. 92, 3,300 ft. N. 80 deg. 45 min. W.
S.D. 2,355 ft.

Crawford et al's No. 1 Hicks et al, 150 ft. SE and NE line of NW, Perdernal grant.
Drig. 1,500 ft.

Dainwood Oil Co.'s No. 1 Guerra, 5,280 ft. W line and N line of Share 36, Porcion 70-71-72.
Location.

R. H. Vise's No. 1 Carruth, 3,690 ft. S line, 3,300 ft. W line, Share B-1, Porcion 91-92.
Abd. 4,016 ft.

F. D. Vernon's No. 1 G.L.&C.C.O., 330 ft. midway between N and S lines of Lot 8, Porcion 100.
Drig. 2,450 ft.

Morris & Bryan's No. 1 Hicks & Hicks, 660 ft. NE line, 2,000 ft. SE line of 500-ac. tract, Pedernal grant.
Drig. 1,103 ft.

C. L. Smith et al's No. 1 J. M. Longfellow, 330 ft. out of NW cor. of Sur. No. 281.
Drig. 5,350 ft.

Conroe Drig. Co.'s No. 1 Guerra, 330 ft. from NE and SE lines of Blk. 35, J. N. Crawford Subd., Por. 56. Jurisdiction of Mier.
Drig. hard lime 2,160 ft.

Dale Sneed's No. 1 Y. and V. Guerra, 330 ft. W line of Por. 68, 330 ft. S line of 1,000-ac. block of N end of Por. 92, in Por. 68.
Spudded.

Sunray Oil Co.'s No. 1 S. Sanchez, 1,500 ft. S of Great Plains' No. 1, in Sur. 344.
Spudded.

E. L. Younkin's No. 1 Kelsey Bass, 220 ft. from S line, 7 ft. from W line of Blk. 19, in Porcion 87.
Drig. 2,608 ft.

TRAVIS COUNTY

Mimms, New & Anderson's No. 1 Bohm, 1,350 ft. SW along NW line of Bohm tract from N cor. and 150 ft. NW in S. Del Valle Sur.
Abd. 510 ft.

D. Prewitt's No. 1 Ed Peterson, 150 ft. from SE and SW lines of tract, L. Kimbro Sur.
Rigging up.

C. A. Stubbs' No. 1 Julius Kerlin, 530 ft. SW line, 450 ft. NW line of 123-ac. tract in I. Lindsey Sur. No. 61.
Drig. 1,060 ft.

Title et al's No. 1 Johnson, 330 ft. each way from cor. of 50-ac. tract in Kimbro Area.
S.D. 976 ft.

WEBB COUNTY

Mills Bennett's No. 1 Slator, 330 ft. SW and NW lines of Blk. 46, Mission Oil Co. Subd., Borrego grant.
Drig. 2,135 ft.

Payne et al's No. 1 Hoggtorp, Blk. 6, Sur. 1,110, N of Oilton.
Spudded and S.D.

WILLACY COUNTY

Daniel et al's (South Texas Dev. Co.) No. 1 Armendias, 1,500 ft. W of Arroya Colorado River, 1,200 ft. N of S line of Tract 4.
Drig. 2,640 ft.

WILLIAMSON COUNTY

Burns & Schramm's No. 1 Bruns, 1,200 ft. SW along SE line of T. A. Biggus Sur. from E cor., thence 444 ft. SE in J. W. Fisher Sur.
Drig. 205 ft.

Fritz Fuchs' No. 1 Pflugger, 500 ft. S and E lines of Jacob Sapington Sur.
S.D. 502 ft.

Johnson & Ray's No. 1-B M. Oxford Smith, 600 ft. S of No. 1-A in S. Williams Sur.
S.D. 20 ft.

Johnson & Ray's No. 1-A Mary Smith Oxford, 350 ft. S. 40 deg. E of No. 1, Williams Sur.
Abd. 1,149 ft.

J. Morgan Russell's No. 1 Nelson, 150 ft. S line, 1,115 ft. E line of John L. Justice Sur. No. 2.
S.D. 594 ft.

WILSON COUNTY

Ray Oil Co.'s No. 1 J. M. McDaniel, 1,700 ft. from SW line, 350 ft. from NW line of 193.5-ac. tract in Concepcion Bostello Sur. No. 9.
Dropped from report.

ZAPATA COUNTY

Danvers & Harrison's No. 1 M. J. Vela, 636 ft. NE line and 330 ft. NW line, or 3,140 ft. E line and 330 ft. N line of Por. 29, Blk. 7, Bela Subd.
Standing 1,850 ft.

H. B. & W. Oil Co.'s No. 1 Cuellar, 150 ft. NE line, 480 ft. SE line of Blk. 3, Sur. 2, Panas Subd., Porcion 34.
Standing 1,345 ft.

H. & M. Oil Co.'s (Virginia Hardee) No. 1 Slator, 514 ft. from SW line, 150 ft. from SE line of Blk. 65, Borrego grant.
Standing 32 ft.

Walter P. Luck's No. 1 A. Trevino, 175 ft. from S and E line of Blk. 41, Sur. No. 13.
Coring 1,512 ft.

Joe Palmer's No. 1 J. M. G. Martinez, 150 ft. SE and SW line, Blk. 37, Sur. 434.
Drig. 905 ft.

ZAVLA COUNTY

Van Beavers et al's No. 1 Flowers, 1,600 ft. E line, 600 ft. N line of Sec. 19, L.&G.N. Ry. Sur., Blk. 1.
Rigging up; ready to spud.

Southwest Texas Proven

Week Ending February 2

CARROLL—BASTROP COUNTY

Nelson Pruett's No. 2 J. H. Carroll, 960 ft. from SW line, 4,150 ft. from NW line of A. Mays Sur. No. 19.
Drig. 600 ft.

NORTH CEDAR CREEK—BASTROP COUNTY

Joe E. Mills' No. 1 Mrs. W. J. Cardwell 900 ft. from SE line, 1,200 ft. from SW line of tract, J. A. Navarro Sur.
S.D.; chalk 1,820 ft.

CAESER—BEE COUNTY

Caesar Oil Co.'s No. 3 R. E. Miller.
Rigging up.

Luling O. & G. Co.'s No. 3 R. E. Miller, N offset to Firm's No. 1 Grissom.
Rigging up.

Luling O. & G. Co.'s No. 1 Hudman, SW offset to Firm's No. 1 Grissom.
Drig. below surface csg.

El Toro Co. of Houston's No. 1 Gardner, 870 ft. from S line, 920 ft. from E line of 105-ac. tract, F. Lewis Sur.
Spudded and set surface csg.

PETTUS—BEE COUNTY

United Prod. Co.'s No. 48 Ray.
Rigging up.

TULETA—BEE COUNTY

Blanco Oil and Buchanan's No. 2-A Perez, 330 ft. from S and E lines of their 100-ac. "A" lease.
T.D. 3,929 ft.; comp.; no gauge.

Blanco Oil and Buchanan's No. 1B Perez.
Drig. below surface csg.

Heyser, Heard & Walton's No. 2 Waldon, Tract 16, of SW¼ of Sec. 9.
T.D. 3,940 ft.; I.P. 24 bbls. first 10 hrs.

Edwin M. Jones' No. 2 Robinson, 330 ft. from S line, 990 ft. from E line of SW¼ of Sec. 5.
Location.

Edwin M. Jones' No. 1 Skinner & Harris.
Rigging up.

Edwin M. Jones' No. 4 Skinner & Harris, 1,650 ft. N line, 330 ft. E line of S½ of NW¼ of Sec. 10.
T.D. 3,946 ft.; I.P. 300 bbls. per day; ¼-in. choke.

Edwin M. Jones' No. 6 Skinner & Harris, 330 ft. from W line, 990 ft. from S line of E½ of NW¼ of Sec. 10.
To set csg. 3,930 ft.

H. K. Hasselman's No. 1 Sparrow, C of Tract 4, NE¼ of Sec. 20, Reaming 3,973 ft.

Houston Oil Co.'s No. 2 Ed Strauss, 660 ft. W of No. 1, Lot 3, SW¼ of Sec. 9 in J. M. Uranga grant.
Moving in rig.

Houston Oil Co.'s No. 4 Ed Strauss, 660 ft. W of Heyser & Heard's No. 1 Walton, Lot 3, NW¼ of Sec. 20, J. M. Uranga grant.
Drig. shale 2,850 ft.

Mills Bennett's No. 2 Harris, 990 ft. from E line, 330 ft. from S line, S½ of NW¼ of Sec. 9, Uranga grant.
Derrick.

Mills Bennett's No. 2 Silcock, 330 ft. from S and E lines of 160-ac. tract.
Coring Pettus sand.

Southwest Exploration Co.'s No. 1 Heyden & Bruckham, C of farm tract, 330 ft. from N and W lines of Sec. 20, Uranga grant.
Rigging up.

Tuleta Oil Co.'s No. 5 Skinner & Harris, N offset to Bennett's No. 1 Tuleta Merc.
Testing 3,884 ft.

VON ORMY—BEXAR COUNTY

Jack Crouch's No. 5 Hoch, 330 ft. S of No. 4, Baerera Sur. No. 58.
S.D. 250 ft.

Richcul Oil Co.'s No. 1 Kohler, 1,000 ft. from N line, 155 ft. from E line of J. Vogt 96.5-ac. tract in J. M. Baerera Sur. No. 58.
Drig. 380 ft.

Richcul Oil Co.'s No. 1 Marshack, 155 ft. from W line, 1,500 ft. from S line of 100-ac. tract, Samuel McCulloch Sur.
S.D. 56 ft.

Richcul Oil Co.'s No. 1 W. A. F. Vogt, 160 ft. from E line, 972 ft. from S line of 300-ac. in S. McCullough Sur. No. 54.
Digging pits.

Richcul Oil Co.'s No. 1 Weilbacker, 155 ft. from E line, about 2,250 ft. S of highway in Jett Sur.
Drig. 650 ft.

ALTA MESA—BROOKS COUNTY

Mrs. Florence East's No. 1 G. Madrigal, 300 ft. S line, 330 ft. E line of Share "R," R. G. Salinas grant.
Abd. 1,600 ft.

Mrs. Florence East's No. 2 Madrigal, 2,970 ft. S line, 990 ft. W line of Share "B," R. G. Salinas grant.
Standing 120 ft.

DALE—CALDWELL COUNTY

McNeil Pet. Co.'s No. 1 J. M. Miears, 660 ft. NW line, 700 ft. SW line of 327-ac. tract in W. C. Swearingen Sur.
Abd. 2,401 ft.

DRISCOLL—DUVAL COUNTY

Continental Oil Co.'s No. 4-A Clara Driscoll Sevier, 160 ft. from W line, 258 ft. from N line of Sur. 448.
Spudded.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Central Prod., Inc.'s No. 2 Wendt, 330 ft. from S line, 990 ft. from W line of NE¼ of Sur. 43.
Drig. 400 ft.

Edgington & Murray's No. 1 C. W. Hahl, 330 ft. N and E lines, Blk. 16, Sur. 250.
Drig. plugs 2,367 ft.

Government Wells Oil Co.'s No. 10 Lundell (State), 660 ft. N of No. 8.
Putting on pump 2,276 ft.

Govt. Wells Oil Co.'s No. 12 State, 330 ft. from S and W lines of SE¼ of Sur. 60.
Drig. 1,450 ft.

Highland Oil Co.'s No. 4 Hahl, 260 ft. from W line, 760 ft. from N line of SE¼ of NW¼ of Sur. 62.
Set csg.; depth not reported.

Humble O. & R. Co.'s No. 2 Vela, 990 ft. from S and E lines of N½ of Sur. 42.
Derrick.

Magnolia Pet. Co.'s No. 2 Duval County Ranch, 330 ft. from S line, 990 ft. from E line of Sur. No. 57.
Derrick.

Magnolia Pet. Co.'s No. 4 Hahl-Norton, 990 ft. from W line, 330 ft. from N line of W½ of SW¼ of Sur. 61.
T.D. 2,330 ft.; I.P. 10 bbls. per hr.

Magnolia Pet. Co.'s No. 4 Humble-D.C.R.C., 330 ft. from S line, 1,650 ft. from E line of NE¼ of Sur. 363.
Location.

Magnolia Pet. Co.'s No. 4-C Hahl, 330 ft. from S line, 990 ft. from E line of Sur. 61.
Drig. 500 ft.

Magnolia Pet. Co.'s No. 2 Herbst, 330 ft. from N and W lines of Sur. 70.
Swabbing 2,742 ft.

Magnolia Pet. Co.'s No. 4 Ruiz, 1,141 ft. from SW line, 330 ft. from NW line of Sur. 127.
Drig. 650 ft.

Magnolia Pet. Co.'s No. 3 D. Ruiz, 672 ft. W line, 726 ft. NW line, Sur. 127.
T.D. 2,442 ft.; I.P. 100 bbls. per day.

Magnolia Pet. Co.'s No. 1 Miguel Ruiz, 330 ft. from S and E lines of NW 200-ac. of S.A.&M.G. Ry. Sur. No. 1.
Coring 3,050 ft.

Salt Dome Oil Co.'s No. 3-B Moody, 990 ft. from N and E lines of NE¼ of Sur. 60, W.O.C. 2,370 ft.

Smith & Story's No. 13 Lundell, 990 ft. from N line, 330 ft. from E line of S½ of Sur. 48.
Drig. 2,000 ft.

Southwest Drig. Co.'s No. 15 Wendt, 990 ft. from W line, 330 ft. from N line of SE¼ of Sur. 43.
T.D. 2,275 ft.; I.P. 250 bbls. per day; ¼-in. choke.

E. R. Thomas' No. 1 Bishop Cattle Co., 2,325 ft. E line, 330 ft. N line of S½ of Sur. 135.
Standing 2,340 ft.

DARST CREEK—GUADALUPE COUNTY

Grayburg Oil Co.'s No. 1 Malaer, 72 acres, 193 ft. from NW line, 215 ft. from SW line of 72-ac. tract in J. B. Alexander Sur.
Drig. 1,200 ft.

LUCAS—LIVE OAK COUNTY

Houston Oil Co.'s No. 30 Cartwright, 1,020 ft. N of No. 26.
Coring 5,090 ft.

Lion Oil Ref. Co.'s No. 3 McNeil, 660 ft. N. 660 ft. E of No. 1.
Drig. 2,100 ft.

MARBACH—LIVE OAK COUNTY

Durbin et al's No. 3 Marbach, 1,800 ft. from E line, 450 ft. from S line of 428-ac. tract in S. Hays Sur.
S.D. 894 ft.

SAM FORDYCE—HIDALGO COUNTY

Alamo Drig. Co.'s No. 2 Guerra, 233 ft. from N line, 330 ft. from E line of NW 12.5 acres of S 75 acres of Tract 254, Por. 40.
T.D. 2,125 ft.; well controlled and capped.

Bridwell Oil Co.'s No. 1 Pena, 165 ft. from W line, 192 ft. from N line of 9-ac. tract, Tract 270, Porcion 40.
Drig. 2,550 ft.

Davis & Harrison's No. 1-A C. E. Smith, Tract B-3, NW 5 acres, 300 ft. from N line, 165 ft. from W line, Por. 41.
T.D. 2,746 ft.; cleaning self.

Henshaw Oil Corp.'s No. 1 Seabury et al, C of SW 11.5 acres of NE 45.25 acres, Tract 256, Por. 38.
Location.

Moncrief & Showers' No. 2-A Lawrence, S end of 9.52 acres in Tract 274, Por. 39, W.O.C. 2,761-63 ft.

Moss & Bass et al's No. 1 F. B. Guerra, 282 ft. N line, 232 ft. W line of W 25 acres of S 50 acres of E 290 acres, Tract 254, Por. 40.
Derrick.

J. M. Newman et al's No. 2 Flores, 190 ft. S line, 240 ft. W line of 10-ac., Tract 275, Porcion 40.
C.O. 2,773 ft.

Navarro Oil Co.'s No. 3 Seabury.
Drig. 2,250 ft.

Reserve Oil Co.'s No. 1 Seabury, 330 ft. N and E lines of 28-ac. tract, Tract 256, Porcion 38.
T.D. 2,774 ft.; I.P. 400 bbls. per day.

Reserve Oil Co.'s No. 2 Seabury, 330 ft. S and E lines of 28-ac. tract, Tract 256, Porcion 38.
Location.

Rogers O. & G. Co.'s No. 2 Guerra.
Drig. 1,600 ft.

Otto Woods' (Kingwood) No. 4 F. B. Guerra, 330 ft. S and E lines of NW 10 acres of S 150 acres, Tract 254, Por. 39.
Moving in derrick.

Otto Woods' No. 4 John Lawrence, 330 ft. from E line, 250 ft. from S line of W 40 acres, Tract 274, Por. 39.
Rigging up.

Otto Woods' (Kingwood) No. 5 John Lawrence, 165 ft. W line, 235 ft. N line of Tract 274, Por. 39.
Moving on.

SANDIA—JIM WELLS COUNTY

O. W. Killam's No. 4 Wade, ¼ mile N of No. 3 Wade.
Drig. 2,259 ft.

Sinclair Prairie's No. 1-A Scelligson, 630 ft. from N line, 320 ft. from E line of B.S. &F. Sur.
T.D. 3,715 ft.; to sidetrack at 2,342 ft.

JACOB POOL—McMULLEN COUNTY

Loma Oil Co.'s No. 103 A. Leonard Jacob, 1,320 ft. S of No. 33-A, 160 ft. E line, W. H. Jacob Sur. No. 8.
Drilling.

Motes & Bettingfield's No. 3 Lark, 660 ft. S of No. 1 and 330 ft. W line of lease.
S.D. 940 ft.

L. D. Ormsby's No. 1 Jacob Corp., Sur. 50.
Abd. 960 ft.

Stewart, Smith & Story's No. 2 Jacob.
Drilling.

SINTON—SAN PATRICIO COUNTY

Heep Oil Corp.'s No. 2 R. Welder, 446 ft. from S line, 2,000 ft. from Eline of Adeline Welder tract in Victor Loupsey Sur.
Drig. shale 4,936 ft.

Humble O. & R. Co.'s No. 1 Welder, 2,400 ft. from N and E lines of 300-ac. lease.
Drig. shale 1,540 ft.

Plymouth Oil Co.'s No. 2-B Welder, start at SW cor. of "B" lease, thence NW along the W line 2,100 ft., thence 350 ft. NE at R/A.
Drig. 6,590 ft.

LOS OLMOS—STARR COUNTY

H. L. Curry's No. 1 Bass, 535 ft. E line, 2,522 ft. N line of Sur. 3, Por. 75-76-77.
Rigged up.

J. P. Kennedy's No. 3 Kelsey-Bass, 200 ft. SE of No. 7 Kelsey-Bass in Blk. 7 of Porcions 75, 76 and 77.
Standing 710 ft.

BARBACOAS—STARR COUNTY

Merren, Johnson & Jeffries' No. 3 S.C.C.C., 330 ft. from S and E lines of Blk. 37, Subd. of Porcion 89.
Testing sand 2,529-37 ft.

SAXET—NUECES COUNTY

Southern Mineral Corp.'s No. 4 Ocher, 1290 ft. S line and 417 ft. E line of Ocher 202.52-ac. tract in Sec. 8.
Derrick.

WEST COLE POOL—WEBB COUNTY

American Liberty Oil Co.'s No. 8-A Bruni, 883 ft. NW line, 777 ft. SW line of Sur. 6, M. Arispe grant.
Location.

American Liberty Oil Co.'s No. 12-A Bruni, 260 ft. from SE line, 418 ft. from NE line of Blk. 44, Sur. 8.
S.D. 2,580 ft.

Herman Brown's No. 5 Bruni, 418 ft. from NE line, 260 ft. from SE line of Blk. 1, Sur. 5.
Drig. 3,109 ft.

Cole Pet. Co.'s No. 90 Bruni, 832 ft. from NE line, 330 ft. from SE line of Sur. 1.
Spudded.

Cole Pet. Co.'s No. 19 Mrs. Benavides, 330 ft. SE line, 1,499 ft. SW line of 300-ac. tract in Callaghan Homestead Tracts.
Location.

Cole Pet. Co.'s No. 19 B. Benavides, 330 ft. NE line and SE line of 300-ac. tract.
Location.

Foster Barnsley's No. 6 Webster, 150 ft. E line, 510 ft. S line of NE SW Sur. No. 484.
Running tubing 3,053 ft.

O. W. Killam's No. 1 Bruni, 200 ft. N and W lines of Blk. 55.
Drig. 3,450 ft.

O. W. Killam's No. 21 Bruni, 2,187 ft. SW line, 150 ft. SE line of Sur. 6.
Drig. 550 ft.

Magnolia Pet. Co.'s No. 5 C. Benavides, 150 ft. from S and E lines of NE¼ of SE¼ of Sur. 661.
Derrick.

Magnolia Pet. Co.'s No. 7 S. Benavides, 330 ft. from SW and NW lines of Blk. 6, O'Hearn & Seacord Subd. Mesquite grant.
W.O.C. 2,814 ft.

Highland Oil Co.'s (Pure) No. 2 Bruni, 330 ft. NW and NE lines of tract in Sur. 7.
Location.

Peerless-Seeligson et al's No. 1 Bruni, 330 ft. from NW and W lines, Arispe grant, Sur. No. 6.
Rigging up.

Sun Oil Co.'s No. 3 Bruni, 260 ft. SE line, 418 ft. NE line of Sur. 5.
T.D. 3,436 ft.; waiting on pump.

Sun Oil Co.'s No. 4 Bruni, 418 ft. NE line, 260 ft. SE line of Blk. 19, Sec. 5.
Drig. 1,995 ft.

Sun Oil Co.'s No. 8 Bruni, 418 ft. from NE line, 200 ft. from SE line of Blk. 5, Sur. 5, W.O.C. 3,421 ft.

BYERSVILLE—WILLIAMSON COUNTY

R. R. Ogden's No. 1 Matteck, 150 ft. N and W lines of 108.5-ac. tract in White Sur.
Location.

CHAPMAN—WILLIAMSON COUNTY

G. L. Rowsey's No. 1 Lee Lawrence, 350 ft. from NW line, 900 ft. from SW line of 70.25-ac. tract, W. West Sur.
Drig. 1,200 ft.

BIAS URIBE—ZAPATA COUNTY

O. W. Killam's No. 9 Bruni, 180 ft. SE line, 400 ft. NE line of Blk. 9, Bias Uribe tract, Borrego grant.
Abd. 2,000 ft.

JENNINGS—ZAPATA COUNTY

Texas Co.'s No. 62 Whitehead, 17,317 ft. from SW line, 2,391 ft. from SE line of Cerrito Blanco grant.
T.D. 1,192 ft.; I.P. 15 bbls. per day.

Texas Co.'s No. 63 Whitehead, 4,004 ft. from SE line, 19,919 ft. from SW line, Cerrito Blanco grant.
Rigging up.

LOPENO—ZAPATA COUNTY

Norden & Morris' No. 1 Leon Ramirez, 603 ft. SE and NE lines of Blk. 4, Por. 29.
Rigging up.

Venture Pet. Corp.'s No. 1 Ramirez et al, 2,120 ft. NE line, 603 ft. from SE line, Blk. 1, Porcion 20.
Drig. 950 ft.

MARTINEZ—ZAPATA COUNTY

S. R. C.'s No. 7 Trevino, Blk. 12, Sur. 65.
Rigging up.

MIRANDO VALLEY—ZAPATA COUNTY

Cliff Durke' No. 1 R. Hinnant, 200 ft. W line, 750 ft. S line of Blk. 16, Sur. 116.
Standing 1,626 ft.

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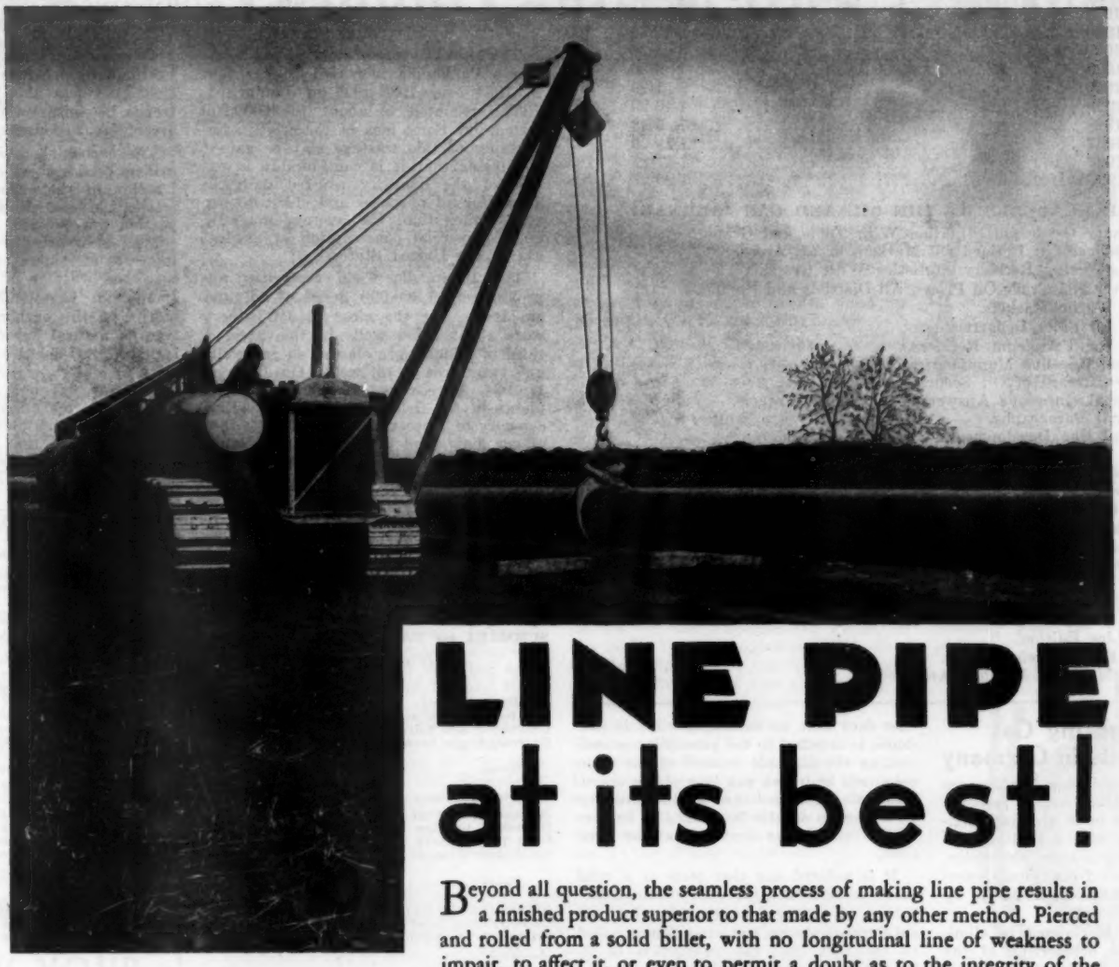

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Field Reports From All Areas, United States and Canada.
Do You Remember? (Started 3-9-33, p. 23).
Monthly Report of California Oil Field Operations.
Magnetic Storms.
Gulf Coast Port Tanker Shipments.
Semiannual Edition.
World Edition.
Pipe Line Edition.
News From Foreign Lands.
Drake Memorial Number, August 23.

Producing Lighting Gas From Lignite in Germany

The problem of producing lighting gas from lignite in the direct way is reported to have been solved by a German engineer in co-operation with a leading German concern supplying gas and electricity, according to a report from Vice Consul J. H. Wright, Cologne, made public by the commerce department.

The new process is claimed to eliminate the drying and briquetting of the lignite previous to the extraction of gas, but permits the extraction of gas from the wet coal without any preparatory treatment. It is claimed that no tar is left by the new process, but that the tar vapors are separately converted into high grade light hydrogen gas. The further fact that no smoldered coke is produced is ascribed to the possibility of converting the carbonic content of the semi-coke into hydrogen gas in a single operation using the moisture of the raw lignite. Carbon dioxide is claimed to be converted into carbon monoxide at the same time.

It is pointed out that tests at a trial plant have confirmed the practical usefulness of the new process, the vice consul's report states, and attention is called to the fact that the production of illuminating gas no longer depends on the availability of bituminous coal. Australia, Canada, and the Balkans are mentioned in connection with the possibility of making use of the new process on a large scale, all of these countries having no hard coal but ample lignite deposits.

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Natural Gas Waste in Texas Panhandle Reviewed by the Bureau of Mines

By G. R. HOPKINS

Acting Chief Economist, Petroleum Economics Division, U. S. Bureau of Mines

The total wastage of natural gas in the Texas Panhandle increased 76 per cent in 1934 over 1933 and on January 1, 1935, amounted to about 1,600,000,000 feet daily. Some idea of the relative importance of this wastage may be gained by stating that it is considerably in excess of the quantity utilized daily in Texas for all purposes and about 60 per cent higher than the average domestic and commercial consumption of natural gas in the United States.

The Panhandle Field comprises approximately 1,300,000 acres of oil and gas lands. At the close of 1933 there were about 2,800 wells in this area, a third of which were classed as gas wells and two-thirds as oil wells. On January 1, 1934, there were 42 natural gasoline plants in the field with a total treating capacity of more than 2,000,000,000 feet of gas daily, and 25 carbon-black plants with a total daily capacity of about 600,000,000 feet. Nine pipe line systems originate in the field, six of which do interstate business. These lines have a daily carrying capacity of close to 900,000,000 feet.

The first gas well in the Panhandle was completed in 1918, but the production did not reach material proportions until 1925 and 1926, when the oil boom was at its height. The six years following 1926 were characterized by steadily increasing production as more gasoline plants and pipe lines were built, but it was not until after the passage of the "stripping law" by the Texas Legislature early in 1933 that the excess of output over the quantity utilized, that is, wastage, reached such proportions as to attract national interest.

As shown by the table, the total production of natural gas in the Texas Panhandle in 1934 was 876,000,000,000 feet (daily average 2,400,000,000 feet), an increase of 46 per cent over 1933. Most of the gas produced in the Panhandle is "dry" gas but it is generally treated for natural gasoline extraction, either for the gasoline it contains or to render it suitable for pipe line transmission. However, it is estimated that 65,000,000,000 feet of "dry" gas was turned into pipe lines in 1934 without treating and that 167,000,000,000 feet was wasted incident to the production of oil and gas. The quantity treated at natural gasoline plants in 1934 was about 644,000,000,000 feet, an increase of 61 per cent over 1933. The production of natural gasoline in 1934 was about 257,000,000 gallons, indicating an average recovery of about 0.4 gallon per thousand feet. The total wastage of natural gas in the Panhandle increased from 275,000,000,000 feet in 1933 to 483,000,000,000 feet in 1934. On a daily average basis, the wastage probably increased from about 500,000,000 feet at the beginning of 1933 to about 1,600,000,000 feet at the close of 1934.

It is obvious that the more gas taken by the several consuming agencies in the field, the less the wastage, hence the trends in consumption of Panhandle gas are of great economic significance.

The carbon-black industry, because it utilizes processes which yield only a small fraction of the carbon in the gas and wastes the heat energy contained in that portion unrecovered, has often been the subject of restrictive laws passed in the interests of conservation. However, the increased wastage of natural gas in the Panhandle has tended to reverse the status of the carbon-black industry as regards natural gas conservation, and it is now often asked to expand its activities in order to prevent waste. This solicitation has had results, as witness the gain in the quantity of natural gas burned for carbon black of from 136,000,000,000 feet in 1933 to about 169,000,000,000 in 1934. However, the economic position of the carbon-black industry is such that a material stimulation of production will undo much of what has been achieved in the past two years toward reducing stocks and stabilizing the market. Therefore, a material reduction in gas wastage through the construction of carbon-black plants does not appear probable.

Deliveries to pipe lines leaving the field constitute the second most important class of demand for Panhandle gas. The expectations of the pipe line operators as regards sales have not been realized because of the depression and competitive conditions; however, daily average deliveries to pipe lines in 1934 (408,000,000 feet) were 15 per cent higher than in 1933. The total capacity of all the lines leaving the field is about 900,000,000 feet daily, hence it might appear that there is room for expansion of about 500,000,000 feet daily in this class of business. Undoubtedly, the pipe lines will increase their takings commensurate with the return of prosperity, but seasonal factors tends to limit the average deliveries of large systems to much less than capacity.

The use of natural gas for field purposes, that is, as fuel in the drilling and pumping of wells and in the operation of refineries and natural gasoline plants, constitutes an important element of consumption in the Panhandle. Although a material increase in field work in 1934 was reflected in an increase in field consumption, the possibilities of further expansion are limited.

The current production of natural gas in the Texas Panhandle is about 2,700,000,000 feet daily, of which about 60 per cent is wasted. Most of the estimates of remaining recoverable gas reserves in the field vary from 10,000,000,000,000 to 25,000,000,000,000 feet, indicating a range of life of from 10 to 25 years, if the present production is maintained.

SUMMARY OF NATURAL GAS STATISTICS FOR THE TEXAS PANHANDLE, 1933-1934

(Figures represent M cubic feet unless otherwise indicated)

	1933		1934		Pct. inc. of 1934
Production—	Total	Dly. avg.	Total	Dly. avg.	over 1933
Treated at natural gasoline plants..	400,000,000	1,096,000	644,000,000	1,764,000	61
Untreated gas delivered to pipe lines	61,000,000	167,000	65,000,000	178,000	7
Untreated gas blown to air at wells.	*140,000,000	384,000	*167,000,000	458,000	19
Total	601,000,000	1,647,000	876,000,000	2,400,000	46
Distribution—					
Burned at carbon black plants	†136,000,000	373,000	169,000,000	463,000	24
Delivered to pipe lines	130,000,000	356,000	149,000,000	408,000	15
Used in the field for fuel	60,000,000	164,000	75,000,000	206,000	25
Total gas wasted	275,000,000	754,000	483,000,000	1,323,000	76
Total	601,000,000	1,647,000	876,000,000	2,400,000	46
Natural gasoline production (gals.)..	182,800,000	504,000	257,600,000	706,000	40
Carbon black production (lbs.)	†194,156,000	532,000	237,000,000	649,000	22
Crude oil production (bbls.)	16,673,000	45,700	20,290,000	55,600	22

*These figures are estimates received from outside sources; all other figures were taken directly from records of the Bureau of Mines or were estimated with such records as a basis. †Revised since the publication of the annual chapter on carbon black for 1933.

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Among Gulf Coast Drilling Contractors

Gus Cormier, president of the C.&R.G. Drilling Co. and the Big Creek Oil Co., who last November carried No. 1 Frank Truska, Mustang Dome, Brazoria County, to a total depth of 7,890 feet on the basis of favorable paleontology, has concluded negotiations with George W. Strake, wildcatter and discoverer of the Conroe Field, to take over the 2,300-acre block held by the Big Creek Oil Co. Acreage is in the H.&T.B. Railway Survey No. 7, Abstract 222. A second well, located 991 feet due west of No. 1 Frank Truksa, carried as No. 2 Frank Truksa, was started by Cormier before the deal was closed Saturday, February 2. This well, in which 850 feet of 13⅜-inch casing will be set at once, will be carried down to 8,500 feet unless production is encountered at a higher level. Consideration involved in the deal was not made public, but was understood to involve a small sum in cash, and substantial oil payments. The new test will be carried down with 12½-inch hole in order that a long string of 9⅝-inch casing may be set. George Strake is reported to have purchased leases or options on an additional 1,700 acres of land adjoining the Cormier block, which was originally assembled by Glen L. Bruner. Cormier's original well, No. 1 Frank Truksa, was projected as a 6,000-foot test, but cores run by R. A. Stamey, of Stamey Eastman & Montgomery, led the operators to carry the hole to 7,890 feet, where it was shut down to permit rigging of a heavier drawworks. During the shutdown the long open hole was lost. Friends of Gus Cormier were congratulating him Saturday, and wishing him good luck on No. 2 Truksa.

Edwards Drilling Co. is cutting screen on the deep well it drilled for Pure Oil Co. at Dickinson, Galveston County, preparatory to deepening. Edwards also is preparing to start up again on No. 1 Chetimanches, Charenton Dome, St. Mary's Parish, Louisiana, where bit was recently got back to bottom at 6,400 feet after a long shutdown. In reopening the hole the original hole was lost at 2,800 feet, and new hole was made from there on down. The test is scheduled to go to 8,500 feet if necessary. Edwards also has one rig running in the Conroe Field for the Feltex Oil Co. of Houston.

C. & C. Drilling Co. has taken contract to drill No. 1 Herman Hospital for Jack Frazier and Cockburn Oil Co. in the vicinity of Addicks, Harris County.

Rutherford Drilling Co. has one rig running for the Atlantic Oil Co. in the Refugio Field. It has completed a dry hole for the Santa Clara Oil Co. in the same field, which was abandoned at 6,381 feet.

Steen Drilling Co. is drilling below 4,100 feet on its wildcat in Robertson County, located on acreage held by the company.

Smith & McDannald have two new locations for the Superior Oil Producing Co. in the Boscoe, Louisiana, Field. They are No. 1 Hernandez and No. 7 Larcade. The company's other rigs are running as previously reported.

George Echols is moving a rig onto the Thompson ranch, Bee County, to drill a well for the Humble Oil & Refining Co. He also has one rig running in the Conroe Field for Houston Oil Co., one rig running at Hebbronville for the Texas Co., and one rig running in Harris County for Walter Goldston.

With 12 rotary rigs drilling, scattered all the way from White Castle, Louisiana, to Eunice, New Mexico. Lon H. Cron (left) and E. J. Gracey (right) have simplified their traveling problem by taking to the air—thus reducing two-day trips to a matter of four or five hours. Their plane is a 6-place Travelair, piloted by Jim Allison, the gent in cowboy boots. Cron avers that air travel is fine, until you hit fog when, he says, the feeling is exactly like losing returns while drilling in a high pressure gas area. In addition to having 10 rigs running on contract work, Cron & Gracey have 2 rigs running on wells of their own. One is drilling on their ninth well in the East Texas area, and one is preparing to complete their first well in the Manvel, Brazoria County area

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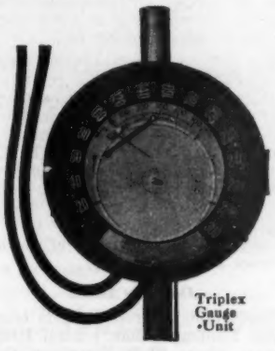

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HOUSTON • TEXAS

Gillis Area, Calcasieu Parish, Now Getting Play; Interest in Danbury Dome Is Being Revived

By F. L. SINGLETON
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Feb. 4.—At the close of the week, the Gillis area, Calcasieu Parish, Louisiana, and the Danbury Dome, central part of Brazoria County, was holding the attention of operators on the Gulf Coast, where two tests have apparently found production from two new horizons.

Fohs Oil Co.'s No. 1 O. H. Castle, located in the Gillis area, Calcasieu Parish, Louisiana, and approximately 1 mile south of production in Section 13-9s-8w, cored 20 feet of saturated sand from 7,051-73 feet, the total depth, and the operators are now preparing to set screen. The test was cored deeper after it had tested considerable gas, a few weeks ago at a total depth of 6,917 feet, which is the approximate producing horizon found in the other two producers in the field. Based on top of the Marginulina, the producing horizon, the Castle test is 72 feet lower than Union Sulphur Co.'s No. 2 Barbe, the discovery well located 1 mile north, and 21 feet lower than the same company's No. 2 State, located a mile and a half northeast. It topped the Discorbis at 6,330 feet, the Heterostegina at 6,601 feet and the Marginulina at 6,691 feet.

The field, which was discovered the first week in December, is receiving an extensive development program, there being five drilling tests and four other locations to be drilled. The next test to reach the pay is expected to be Union Sulphur Co.'s No. 1 Powell Lumber Co. in Section 12-9s-8w, which is drilling below 6,476 feet in sandy shale. The company has three other active tests, but are not deep enough to be of much importance at this time.

Danbury Dome

Considerable interest is again centered on the Danbury Dome, central Brazoria County, where Shell Petroleum Corp.'s No. 3 Haury made its appearance as a possible commercial well, when it tested and estimated 1,000,000 feet of gas, and from 3 to 4 bbls. of oil per day through a three-eighths inch choke, with tubing pressure 275 pounds and casing pressure 475 pounds. Seven-inch casing was cemented at 7,185 feet and it is producing from the Frio formation bottomed at 7,327 feet. Out of 10 tests completed on this salt dome by Shell Petroleum Corp., so far none has developed commercial production. The company's No. 1 Blakely-Winston, in H.T.&B. Survey No. 14, the first test drilled, which proved the prospect a salt dome, by encountering the salt from 5,228-55 feet, was plugged back to a shallower sand around 1,600 feet, where it was completed for a small pumper, but was later abandoned. The company's No. 1 Schmitt, in the J. H. Bruner Survey, was abandoned after it blew out at 1,633 feet.

The well is in the H.T.&B. Survey No. 13, and this is the second showing to be encountered. It blew out in August from 6,284-86 feet and blew wild for five hours. The company has one other active test, drilling below 6,085 feet in sandy shale. On a drill stem test made last week, with the seat at 6,040 feet, gas pressure built up to 500 pounds in six minutes. With the two showings made in the above two tests, this dome may yet be added to the list of deep producing salt domes on the Gulf Coast.

Calhoun County

The Port Lavaca area, Calhoun County, recently proven productive by Steen Drilling Co.'s No. 1 Stanzel, received its first location, since the completion of the discovery well, when Steinberge Petroleum Co. staked its No. 1 W. A. Shofner, located 330 feet from the south and east lines of a 100-acre tract in the M. Sanches Survey, approximately 1,500 feet northwest of the discovery. The test is scheduled to be drilled to 6,200 feet and is to be started by the middle of February.

Cleveland Field

Black Gold Oil Corp.'s No. 1 R. D. McDonald, a possible extension test to the Cleveland Field, Liberty County, encountered some trouble in trying to bring the well in, when the swab was lost in the hole, and the operators are now fishing. The swab was run five times which lowered the fluid in the tubing 400 feet. The test is located 650 feet west of production in the T. Devers Survey, and is bottomed in shale at a total depth of 5,839 feet. Seven-inch casing was cemented at 5,289 feet, and 2½-inch tubing was swung at 5,823 feet. Gulf Production Co.'s No. 8-C Kirby, located 933 feet east of No. 1, is drilling in shale below 4,875 feet.

Harris County

Considerable interest is being centered on the wildcat test of Cockburn Oil Corp. and others' No. 1 Brooks, a wildcat located east of Houston in the Richard and Robert Vince Survey, Harris County. Late in the week the test was preparing to start up after being shut down at 5,073 feet, while the operators were repairing the boilers. It is considered to be running approximately 200 feet high and is expected to pick up the pay horizon the first part of the week.

The county received another wildcat location during the week, when Cockburn Oil Corp. and Frazier made location for their No. 1 Herman Hospital Estate, located southeast of the town of Addicks, in the western part of the county. It is 910 feet north and 300 feet west of the southeast corner of the tract in the William Hardin Survey. Material is being moved in for the test. In the western part of the county, and on the Ogburn Prospect, W. L. Goldston and others' No. 1 Weingarten, located in Section 9, Block No. 2, H.&T.C. Survey, is drilling in shale below 6,070 feet. It is reported to be running considerably lower than General Crude Oil Co.'s No. 1 Rorick, a dry hole located north and slightly east.

Fort Bend County

In the northeast part of Fort Bend County, and located on a 2,000-acre block, George White and others have made location for a wildcat test to be drilled on the M. M. Cravins land, located 1,000 feet north and 3,000 feet west of the southwest corner of the B.B.B.&C. Survey.

Matagorda County

On the Sheppards Motts Prospect, Matagorda County, Cockburn Oil Co.'s No. 6 Hawkins in the Daniel McCarthy Survey made a three-minute drill stem test from 5,162-85 feet in broken sand, shale and lime and recovered 90 feet of drilling mud, with a slight cut of oil and gas, through a one-quarter inch choke on top and bottom. The operators made an electrical coring test at 5,323 feet and are now washing to bottom in heaving shale at a total depth of 5,484 feet.

Wharton County

Locations for No. 3 and No. 4 Stewart were made in the Louise Field, Wharton County, by Pure Oil Co. No. 3 Stewart is located 1,000 feet southwest and 318.25 feet southeast from the north corner of the W. L. Stewart 160-acre tract in the Morris and Cummings Survey. No. 4 Stewart is located in the same survey and is 330 feet northwest of the east corner of W. L. Stewart 160-acre tract. The company is plugging back its No. 3 Kountze and No. 1 Wharton to the upper sand, which tested considerable oil a few weeks ago on a drill stem test. Its No. 3 Kountze in Section 9, Morris and Cummings Survey, is being plugged back from a total depth of 6,534 feet to sand found from 5,161-69 feet. No. 1 Wharton is bottomed at 6,510 feet and the operators are cementing back to complete in the upper sand from 5,147-70 feet.

Kittrell Field

In the Kittrell Field, south Houston County, Humble completed its No. 5 Shaw, located in the Charles McEllis Survey, for an initial production of 15 bbls. per hour through a three-quarters inch choke, with tubing pressure 50 pounds and casing pressure 100 pounds. It topped the oil sand at 1,928 feet, and was cored to 1,990 feet, the total depth. Seven-inch casing was cemented at 1,961 feet. Killough and Tucker's No. 1 L. W. Huffman, being drilled on a 20-foot excess acreage strip between the Huffman and Shaw tract in the Charles McEllis Survey, cemented 10-inch casing at 309 feet and is drilling in shale below 468 feet. Sun Oil Co.'s No. 1 Huffman cemented 10-inch casing at 317 feet and is drilling below 600 feet in shale. Three of the producers which went dead are now back on production. Humble Oil & Refining Co.'s No. 2 Shaw was brought

Wildcat Operations on Gulf Coast

Week Ending February 2

RACCOON BEND—AUSTIN COUNTY

Humble O. & R. Co.'s No. 4-X Jackson, 315 ft. from SE line, 313 ft. from NE line. Wm. C. White Sur.
10¾-in. csg. 1,154 ft.; drlg. shale and lime 3,980 ft.

Humble O. & R. Co.'s No. 5-X McCasland, 419 ft. SE along NE line, 377 ft. at R.A. from NE line, Wm. C. White Sur.
T.D. 4,140 ft.; 7-in. csg. 3,972 ft.

Humble O. & R. Co.'s No. 8-X Sanders.
T.D. 3,220 ft.; pumping 25 bbls. daily.

Humble O. & R. Co.'s No. 9 Sherrod.
S.D. 4,140 ft.

Humble O. & R. Co.'s No. 11-X Woodley.
Coring shale 7,042 ft.

DANBURY—BRAZORIA COUNTY

Shell Pet. Corp.'s No. 7 Blakely-Winston, 63 deg. 11 min. E, 5,540 ft. N, 26 deg 49 min. W, 200 ft. from SW cor. of Blakely-Winston 560-ac. tract, H.T.&B. Sur.
Coring sandy shale 6,085 ft.

Shell Pet. Corp.'s No. 3 Haury, 800 ft. SE of No. 2 in line with No. 2 and No. 1 Blakely-Winston, H.&T.B. Sur. No. 13.
T.D. 7,237 ft.; making from 3 to 4 bbls. per hr. through ⅜-in. choke; tubing pressure 275 lbs.; csg. pressure 475 lbs.

DAMON MOUND—BRAZORIA COUNTY

Gulf Stream, Inc.'s No. 1 Cave Heirs, 160 ft. from N line and 60 ft. from E line of Lot C, Blk. 50, A. Darst Sur.
Drlg. shale 1,710 ft.

Esco's No. 1-D Wisdom, 25 ft. from S and W lines of Blk. D, Lot 5, A. Darst Sur.
S.D. 1,563 ft.

HASTINGS—BRAZORIA COUNTY

Stanolind O. & G. Co.'s No. 1 W. J. Miller, 466 ft. out of SW cor. of the Miller 3,939-ac. tract, in A.C.H.&B. Sur. No. 2, 2,000 ft. E of discovery well.
Drlg. shale 2,945 ft.

Stanolind O. & G. Co.'s No. 1 Steve Paul, 476 ft. from the E line and 466 ft. from N line of 160-ac. tract, A.C.H.&B. Sur. No. 2, 2,100 ft. S of discovery well.
Drlg. shale 1,276 ft.

MANVEL—BRAZORIA COUNTY

Allison & Richey's No. 2 Gulf Coast Home Co., 347 ft. S, 441 ft. W from NE cor. of Lot 18, H.T.&B. Sur. No. 2-B.
Rigging up.

Bowles & Borsodi's No. 2 Norvell Investment Co., C of Lot 57, H.&T.C. Sur.
Location.

Bowles & Borsodi's No. 3 Norvell Investment Co., Blk. 46, H.&T.C. Sur. No. 23.
Rig up.

Cron & Gracey's No. 1 Gubert, Charles O'Donnell Sur. No. 74.
T.D. 5,153 ft.; 7-in. csg. 5,142 ft.

J. W. Sorrells' No. 1 Swift, Blk. 21, Abst. 218, H. N. Little Sur.
Derrick.

Texas Co.'s No. 1 C. P. Dawson, 2,475 ft. S, 441.9 ft. W of NE cor. of Lot 59, H.T.&B. Sur. No. 23.
Derrick.

Texas Co.'s No. 3 A.R.G.G.H. Co., in C of Lot 37, H.&T.C. Sur. No. 23.
Rig up.

Texas Co.'s No. 10-A Belcher, N 43 deg. E 330 ft. and N 48 deg. W 330 ft. from S cor. of Belcher "A" lease, H. N. Little Sur.
Drlg. shale and lime 2,661 ft.

Texas Co.'s No. 17 Houston Oil Fields Assn., 344 ft. S, 344 ft. W, from NE cor. of Lot 1, A.C.H.&B. Sur. No. 91.
Location.

Texas Co.'s No. 16 Houston Oil Fields Assn., 247 ft. S, 440 ft. E from NW cor. of Lot 19, A.C.H.&B. Sur., No. 91.
Location.

Texas Co.'s No. 1 J. L. Lemmer, 330 ft. S 48 deg. E and 330 ft. N, 42 deg. E of W cor. of lease, Thomas Sproggins Sur., Abst. A-366.
10-in. csg. 115 ft.; drlg. gumbo 5,097 ft.

Texas Co.'s No. 1 Joe Grace, 300 ft. S, 300 ft. W of NE cor. of lease, Lot 7, Charles O'Donnell Sur. No. 74.
7-in. csg. 5,123 ft.; T.D. 5,154 ft.; I.P. 492 bbls. per day; tubing pressure 475 lbs.; csg. pressure 475 lbs.

Texas Co.'s No. 1 C. P. Dawson, 247 ft. S, 441 ft. W of NE cor. Lot 59, H.T.&B. Sur. No. 23.
Rig up.

Texas Co.'s No. 2 Dawson, 247 ft. S, 241 ft. W of NE cor. of Lot 58, H.T.&B. Sur. No. 23.
Location.

Texas Co.'s No. 1 L. C. Dawson, 247 ft. S, 441 ft. W of NE cor. of Lot 49, H.T.&B. Sur. No. 23.
Location.

Texas Co.'s No. 2 Dawson, 247 ft. S, 441 ft. W of NE cor. Lot 48, H.T.&B. Sur. No. 23.
Location.

Trumba Oil Co.'s (J. M. Campbell) No. 1 H. McCauley, 150 ft. each way out of NE cor. of W 5 acres of Lot No. 2, A.C. H.&B. Sur. No. 91.
Location.

STRATTON RIDGE—BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 6 Selder & State, 225 ft. due N of No. 3.
Location.

WEST COLUMBIA—BRAZORIA COUNTY

Sterling O. & R. Co.'s No. 4 Hogg, 200 ft. S of No. 1, 50 ft. from W line of lease, Martin Verner Sur.
Drlg. shale 4,410 ft.

Texas Co.'s No. 84 Hogg, 2,483 ft. N, 50 ft. W from SE cor. of lease, M. Varner Sur.
Temporarily S.D. 5,242 ft.

BARBERS HILL—CHAMBERS COUNTY

Moody Corp.'s No. 1-C E. W. Barber, 302 ft. from N line and 312 ft. from E line of "B" lease, H. Griffith Sur.
Drlg. shale 3,929 ft.

Humble O. & R. Co.'s No. 8-B Kirby, 200 ft. N of No. 2, 100 ft. W of E line, Henry Griffith League.
13⅜-in. csg. 1,236 ft.; drlg. rock 1,348 ft.

Sun Oil Co.'s No. 15 Wilburn, 405 ft. from E and 50 ft. from W line of lease, Wm. Hodges Sur.
Running tubing 5,218 ft.

Sun Oil Co.'s No. 17 Wilburn fee, 188 ft. E of W line and 40 ft. S of N line and 120 ft. W of No. 16.
T.D. 1,078 ft.; P.B. 443 ft.

Texas Gulf Prod. Co.'s No. 12-A Kirby, 613 ft. N of S line, 85 ft. W of E line, W of Humble O. & R. Co.'s No. 8-B Kirby.
Derrick.

Texas Gulf Prod. Co.'s No. 3 T. S. Fitzgerald, 340 ft. S of N line and 60 ft. E of W line of lease.
Drlg. salt 2,922 ft.

Texas Gulf Prod. Co.'s No. 2 Morgan Fitzgerald, 400 ft. N of S line, C of Strip No. 3.
Drlg. lime 2,703 ft.

Texas Co.'s No. 10 Wilburn, 475.5 ft. N, 39 deg., 10 ft. W from SW cor. of lease.
Drlg. shale, sand and lime 4,622 ft.

Yount Lee Oil Co.'s No. 9 Woodward.
Swabbing oil and S.W. 5,374 ft.

Yount Lee Oil Co.'s No. 27 Chambers Co.,

(Continued on Page 82)

back on production and is flowing and pumping 143 bbls. per day. Boone Brothers' No. 1 Trinity State Bank, the discovery well, has been rigged up with a pumping unit and is pumping 75 bbls. per day of which 12 per cent is b.s.&w. The same operators' No. 2 Trinity State Bank is flowing approximately 175 bbls. per day through a 1-inch choke. There was no gauge on the pressures.

In the same county, the wildcat test of Adams and others' No. 1 Sanders, in the J. Thomas Survey, approximately 2½ miles northeast of the town of Lovelady, is reported to be making a drill stem test after the operators had topped a sand at 1,591 feet, which is reported to have carried an odor of gas, with a slight stain of oil. It is bottomed at 1,635 feet. Yount Lee Oil Co. is reported to have leased 371 acres from the Starr estate in the T. F. Forbes Survey for a consideration of $12.50 per acre. The acreage is located in the vicinity of the above test. In the same area, McElreath and Suggett of Fort Worth have leased 250 acres of the Munn land in the E. Tyler Survey.

Brazoria County

In the Hastings Field, northeastern Brazoria County, Stanolind Oil & Gas Co.'s No. 1 J. W. Surface, the discovery well, which was recompleted last week at a new total depth of 6,003 feet, and made 134 bbls. in 14 hours, has been killed on account of gas pressure showing up between the 7-inch casing and 9⅝-inch casing. Before being deepened, the operators experienced the same trouble with the escaping gas. Before being killed, the well was producing at the rate of 7 bbls. per hour through a three-sixteenths inch choke on the tubing, with tubing pressure 1,350 pounds and casing pressure 1,850 pounds. The same company's No. 1 J. Miller, located 2 000 feet east of the discovery well, is drilling in shale below 2,945 feet. South of the discovery, its No. 1 Steve Paul, in the A.C.H.&B. Survey No. 2 is drilling in shale below 1,276 feet.

Northwest of the Hastings Field, and in the extreme north part of Brazoria County, Big Creek Oil Co.'s No. 2 Truska, which has been standing shut down at 800 feet for several weeks, has been taken over by George Strake and is expected to resume operation within the next few days.

Jefferson County

Sun Oil Co.'s No. 1 Hugh Long, located on the Nome Prospect, northwestern Jefferson County, in the John Blair Survey, is fishing at a total depth of 9,045 feet. So far attempts to complete this deep test for a producer have been disappointing. Two attempts have been made and each time it swabbed salt water, with gas pressure building up to 300 pounds.

Angelina County

In Angelina County, LaRue and others' No. 1 W. D. Ivy, a wildcat test located in the S. Bell Survey, cored shale with thin streaks of sand, which is reported to have had a good odor of oil and some saturation from 1,452-59 feet, and the operators are preparing to make a drill stem test.

Danciger Oil & Refining Co. made location for its No. 2 Minnetex in the Mykawa Field, Harris County. It is 150 feet from the south line and 87.5 feet south from the east line of Block 192, William Lovett Survey, West Production Co.'s No. 1 Medelsohm and Ryeman in the F. J. Rothas Survey is drilling in shale below 3,983 feet.

Bosco Field

Another 1,000-foot west extension was marked up for the Bosco Field, Acadia and St. Landry Parishes, when Superior Oil Producing Co. completed its No. 1 E. Comeaux ("A" lease) for an initial production of 351 bbls. in 24 hours through a nine-sixty-fourths inch choke, with tubing pressure 1,100 pounds and casing pressure 1,200 pounds. It is bottomed at 8,743 feet, with 7-inch casing cemented at 8,734 feet. The company's No. 3 Comeaux, within the proven limits of the field, was completed for a gas well at a total depth of 8,070 feet, and is now shut in. Seven-inch casing was cemented at 8,050 feet.

The deep test of Humble Oil & Refining Co.'s No. 3 Devilbiss in the Roanoke Field, Jefferson Davis Parish, has been plugged back to 9,330 feet, and the operators are now swabbing, after setting 244.8 feet of screen. It was plugged back from a total depth of 9,425 feet, where two weeks ago it tested considerable gas and salt water. Location is three-quarters of a mile southwest of the discovery well. The company's No. 1 Jarnigan in Section 12-9s-4w is coring in shale and lime below 9,365 feet. Shell Petroleum Corp.'s No. 1 Jarnigan, an east offset to the discovery well, established a new drilling depth when it reached a total depth of 9,909 feet, where it is shut down, while the operators fish for four joints of pipe which was lost in the hole.

South of the Roanoke Field, it is reported that Shell Petroleum Corp. has finished shooting its block of approximately 6,000 acres, which includes acreage in Section 1, 2, 3, 10, 11, 12, 13, 14 and 15 in Township 10s-4w.

The wildcat test of George W. Strake's No. 1 Calcasieu National Bank in Section 12-9s-6w is preparing to set a string of casing at about 7,400 feet to protect that portion of the hole, and then sidetrack and drill back down to the oil sand reported cored from 8,080-91 feet, the total depth. The operators were preparing to test when the drill stem was stuck at 4,900 feet. It is located on a block of approximately 5,000 acres and is 5 miles northeast of the Iowa Field and 3 miles northwest of the Welsh Field.

The showing made by the test is creating considerable leasing and royalty trading in the area.

Deep Tests

A recent survey of the deep tests being drilled on the Gulf Coast show a total of five tests below 9,000 feet and a total of seven tests drilling below 8,000 feet. For the same time during the previous year there was only one test below 9,000 feet and only two below 8,000 feet, which shows an increase toward deeper drilling throughout the district.

On the Crowley Prospect, in Acadia Parish, Humble Oil & Refining Co.'s No. 1 American Rice Mills, in Section 27-10s-1e, is coring in shale below 7,742 feet. Several shows of oil are reported to have been encountered in the test, and it is being watched with considerable interest.

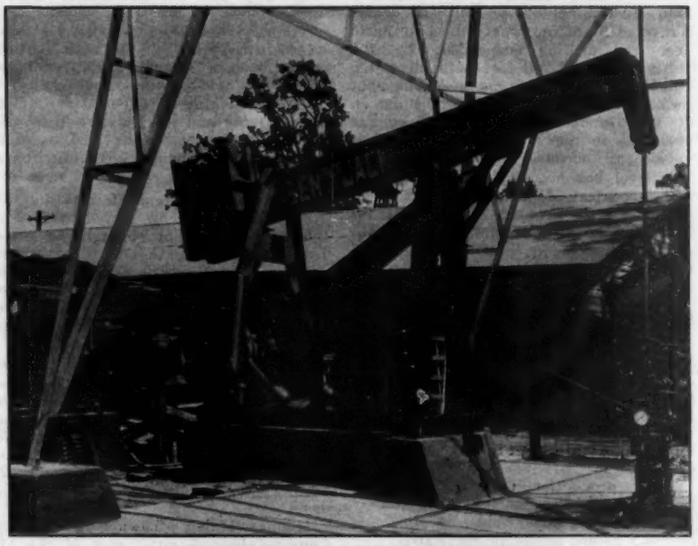
GIVEN PROMOTION

On a recent business trip to Houston, Tex., W. H. Whittekin, vice president and general manager of the Oil Well Supply Co., Dallas, Tex., named R. H. Christy district manager at Houston, and Norman E. Giles, store manager. Both men have been located in the Gulf Coast for a number of years.

Norman E. Giles and R. H. Christy

14 MONTHS of Steady Pumping

without a shut-down for repairs



A TYPICAL EXAMPLE OF CASE PERFORMANCE

A Case Model "CE" engine installed on one of the principal leases in California, ran continuously for 14 months without a shut-down for repairs. It replaced an electric motor pumping seven wells on a jackshaft. The cost for fuel (natural gas) averaged 83 cents per 24 hour day.

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For a reliable, durable, economical power unit, a Case engine is unbeatable. Don't buy a new engine or replace an old one without getting all the facts about the real savings Case can make for you.

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Michigan Production Exceeds 35,000 Bbls. From 902 Wells; New Showing in Isabella County

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Feb. 4.—A new wildcat show of oil in the upper Traverse formation in Fremont Township, Isabella County, and near record production of crude oil were outstanding developments in Michigan fields last week.

The prospective new well in wildcat territory south of the village of Winn was drilled into the Traverse pay sands at 3,118-30 feet by the Pure Oil Co. in its No. 1 Lucy Baker, SW NW SE Section 15-13n-5w. The hole, in which Traverse limestone was topped at 3,040 feet and drilling suspended at 3,150 feet, filled up 1,200 feet with oil and a considerable flow of gas and was shut down for a careful test before going on to the Dundee. For while oil or gas showings in the Traverse limestone are considered encouraging, production at this level has not proved very substantial in central Michigan.

The test is located about 10 miles southeast of the Broomfield Township gas field and about 5 miles southeast of a dry hole drilled to the Dundee last year by the Lupher Drilling Co. on the Bear lease in Section 36, Broomfield Township.

Considerable interest also was being shown in the Pen-Yan Investment Co.'s No. 1 A. E. Ackerman, SW NW NW Section 12-16n-4w, Vernon Township, in the northern part of the county, which was being drilled at more than 3,000 feet by J. W. McIntosh, former Muskegon contractor.

Daily production from 12 Michigan fields has increased during the past two weeks to about 35,000 bbls., rivaling the previous record period in May, 1934.

Average daily production from 902 wells for the week ended May 4, 1934, was 35,156 bbls., contributing to the State's all-time record monthly production of 984,341 bbls. Average daily production of 978 wells for the week ended January 26, 1935, was 34,636 bbls., with indications this high rate will continue to a possible new monthly record in February based on statements from leading crude purchasers. The high weekly total was set during the period ended May 4 when 246,092 bbls. was produced.

Under a new system of proration now being considered by the Michigan Producers Proration Committee the state potential would be reduced about 100,000 bbls. from 150,000 to about 50,000 bbls., and a new proration schedule providing a minimum exemption of 75 bbls., a 50 per cent allowable per well above the minimum.

If this plan is adopted most of the producing wells in Michigan, with the exception of a few in the Porter Township, Midland County Pool, will be permitted to produce on an unrestricted basis with an anticipated further increase in daily production.

The new schedule would be based on the committee's estimates as to what the wells might produce over a period of time if unrestricted in flow. With actual available production about equal to present market demands considerably increased activity in undeveloped but proved areas as well as in wildcat areas is anticipated soon.

Increased Drilling Prospect

Prospects of increased drilling activity in Central Michigan gas fields also are seen by the geology division of the State Conservation Department as recent cold weather has resulted in a heavier pull on wells supplying a score or more cities with natural fuel for cooking and heating.

The peak winter load is taxing the capacity of present producing fields and stimulating new drilling activity, it was announced in Lansing.

A 1-mile extension of the Broomfield area into Sherman Township during recent months has opened a new area for successful drilling operations and an increased supply for the Consumers Power Co. line serving Midland, Saginaw, Bay City and several smaller communities.

Additional drilling activity is anticipated in the spring in the Austin Township, Mecosta County Field, while an outlet for new production discovered in Hinton and Millbrook Townships of the same county and in Belvidere Township, Montcalm County, is expected to result in further development in this section of central Michigan.

Muskegon, Muskegon Heights and Big Rapids are now being served with about 3,000,000 feet a day through the American-Michigan Pipe Line Co. of Muskegon and the Big Rapids Gas Co. The Gas Corp. of Michigan also is supplying Mount Pleasant, Clare and several smaller communities from the Vernon Township, Isabella County Field.

Pure Oil Co. is expected to proceed with development in the Yost-Jasper area between the Greendale and Porter Pools, the largest undeveloped but proved territory in central Michigan. Present development indicates a pool of several hundred acres with wells spaced one to 20 acres coming in for 100 to 500 bbls. a day.

Mount Haley Township, Midland County, about 5 miles east of the big Porter Pool, also is due for an increased drilling play if three tests now drilling near the Atha Oil Co.'s No. 1 Moran discovery well prove successful.

Increased activity in the Denver, Rosebush and Vernon areas in Isabella County also is expected during coming weeks. Wildcatting also should be stimulated.

Operations of several new independent refineries and plans for expansion of others is partially accountable for an already increased market for Michigan crude.

About 1,000 bbls. of new initial was added to the Michigan record during the past week by new completions and acid treatment.

Four new Dundee producers ranging from 25 to 700 bbls. had an aggregate initial production of about 850 bbls. Two were being treated with acid for possible increases. All were in Porter Township, where four other wells also were improved with acid treatment, comprising most of the rest of the new initial. One Denver Township, Isabella County well, also was increased from 10 bbls. initial to about 30 bbls. a day by acid treatment.

Midland County

Pure Oil Co.'s C No. 3 Root, NW NW NW Section 20-13n-1w, Porter Township, was the largest new completion of the week, making about 700 bbls. a day in the Dundee pay sands.

Two other small wells, both of which are being treated, added 50 and 25 bbls., respectively. Pure's No. 13 Mina Narmore, SE SW SW Section 15, made 50 bbls. initial after drilling to a total depth of 3,441 feet. Same company's B No. 3 Laura E. Root, NW SW SE Section 7, made about 25 bbls. natural after plugging back 6 feet from 3,455 feet, total depth.

The McClanahan Oil Co.'s No. 2 Eliza Breu, NE SW SE Section 25, was estimated good for 75 bbls. daily after striking the Dundee pay at 3,438-46 feet after topping the lime at 3,408 feet.

Rex Oil & Gas Co.'s No. 1 Frank J. Howland, NW SW NW Section 23, drilled in about three weeks ago, was increased from 48 to 70 bbls. a day by acid treatment.

Three other older wells, Pure's B No. 2 Laura E. Root in Section 7, and Pure's No. 1 Kleinhans and B No. 1 Bond also were increased in flow by the use of acid. Pure's No. 1 Baxter in Section 15 was plugged and abandoned after dropping off to very small output.

Isabella County

Four Isabella County tests, three in Denver Township and one in Isabella Township, also were treated with acid with beneficial results.

Acid was believed to have increased the flow of the Mammoth Petroleum Corp.'s No. 1 B. E. Johnston, NE NE NW Section 33-15n-3w, the Jackson-Meyer Syndicate's No. 1 Hughes, SW NW NE Section 19, and the McClanahan Oil Co.'s No. 1 B. Wonsey, Section 33, all in Denver Township, although actual production records after acid treatment were not yet available.

The Wittmer Co.'s No. 1 Malcolm McCloud, W half W half SE Section 12-15n-4w, Isabella Township, increased about 20 bbls. a day from 10 to 30 bbls. after acid treatment. It may be given another treatment.

Dry Hole

One dry hole was reported during the week in the Oregon Township, Lapeer County, area in southeastern Michigan.

George Henry Flynn Oil & Gas Co.'s No. 1 Samuel P. Conkling, E SW NW Section 4-8n-9e, was dry, plugged and abandoned in the Berea at 1,445 feet.

Ogemaw County

Muskegon Development Co.'s No. 1 Cora F. Barber, SW SW NW Section 28-22n-2e, West Branch Township, Ogemaw County, also was drilled into the Dundee but not yet completed. It filled up several hundred feet in the hole in a few hours and is expected to make about a 50-bbl. well. Dundee limestone was topped at 2,526 feet and the hole drilled to 2,700 feet.

Nearing Completion

Eighteen tests, 13 in eight proved fields in three central Michigan counties and five in as many central and western Michigan couties are nearing completion.

The Porter Township, Midland County, and West Branch Township, Ogemaw County, fields share first honors in this division of activities with three each nearing completion.

The three Porter tests were the Carter Lease, Inc.'s No. 6 William Maywood Carter, NW SW SE Section 18-13n-1w; Richard Hall's No. 3 Harris-Bond, NW NW SE Section 7, and Pure Oil Co.'s No. 3 Harry Peek, SW SE NW Section 16. The three West Branch projects were W. J. Sovereign's No. 1 Golf Club, SE SW SW Section 20-22n-2e, and Theodore Oil Co.'s No. 1 Ogemaw Country Club in Section 20, both completing after being drilled in recently and the McClanahan Oil Co.'s No. 2 O. A. Guilford, NW NE NW Section 29, drilling in.

Three other Midland County tests in as many townships also were nearing completion as follows: Pure Oil Co.'s C No. 6 Glenn M. Reem, SW NW SE Sec-

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Alberta Production 1,265,940 Barrels, With Approximate Value $3,100,000

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Feb. 2.—Official figures show production of crude naphtha and crude oil from Alberta pools in 1934 totaled 1,265,940 bbls., representing an approximate value of $3,100,000. Production of the Alberta fields since they were first opened totals 8,391,202 bbls. with a valuation of $26,170,000.

The 1934 total included 1,210,766 bbls. of Turner Valley naphtha; 21,896 bbls. of Turner Valley light crude; 20,989 bbls. of light crude from Red Coulee and other border areas; 11,779 bbls. of heavy crude from the Wainwright Field, and 510 bbls. of heavy crude from the Skiff Field. The 1934 total was the highest since 1931, when the Alberta output was 1,455,195 bbls.

December production for Alberta fields totaled 105,804 bbls., comparing with 98,638 bbls. in November. The December total included: Turner Valley naphtha, 101,638 bbls.; Turner Valley light crude, 1,690 bbls.; Red Coulee light crude, 1,701 bbls.; Wainwright heavy crude, 775 bbls.

Royalite Oil Co. was the major producer in Turner Valley in December, with 36,034 bbls., including the absorption plant output. Mercury-Miracle ranked second with 17,289 bbls. Highwood-Sarcee Oils, with 9,334 bbls., was third, and had also the largest production from a single well. Model Oils, Ltd., had 5,101 bbls. Among the newer wells, Century Royalties' No. 1 produced 4,047 bbls.; Carleton Royalties, in part production, 1,204 bbls.; Director Royalties' No. 1, also in part production, 571 bbls. Northwest Co.'s No. 1 Longview, with 1,243 bbls., had practically doubled its initial yield of 21 bbls. a day.

South Turner Valley

In Section 28-12-2w5, South Turner Valley, Spooner Oils' No. 5 Anaconda, LSD 1, is 795 feet in the Madison at 6,305 feet, and testing production. It looks like a small producer, under 50 bbls. a day, and will be shot. In addition to naphtha recovery it has been taking between 30 and 40 bbls. of light crude daily from the Dalhousie sand. In the northeast corner of the section, Director Royalties' No. 1, LSD 16, finished at 5,644 feet, is clearing itself of drilling water and has a wet gas flow around 9,500,000 feet a day. Pacalta Oils' No. 1, LSD 7, same section, is building up and blowing to clear the hole of water, and shows increasing flow. Carleton Royalties' No. 1, LSD 2, has increased production a little; when the weather moder-

(Continued on Page 71)

Oriskany Test Encounters Cave at 4,927 Feet; Twenty Completions in Lower Eastern Fields

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Feb. 4.—The deepest of the tests drilling to the Oriskany sand in Elk district, Kanawha County, West Virginia, reached 4,927 feet and shut down cementing a cave. It is on the W. T. Copen heirs farm and being drilled by S. B. Avis, trustee for Grosscup and others. This cave is believed to be the usual cave found before penetrating the Onondaga limestone in which case the top of the Oriskany sand would be about 100 feet deeper. The producer on the W. L. Burdette farm had a depth of 4,826 feet and the elevation of the derrick floor is 215 feet less than that of the Copen heirs test.

Other wells drilling in this vicinity include the following and the present depths: V. C. Smith and others on the island at the mouth of Coopers Creek; the Matheney, Wertz and others lease at 3,590 feet; Clyde Oil & Gas Co., on the F. W. Shinn farm, drilling at 2,950 feet; Yoak Oil & Gas Co., on the W. T. and J. H. Goshorn farm, drilling at 1,050 feet; Benedum & Trees, on the Mary C. Wingfield farm, drilling at 775 feet.

In addition to the wells drilling, Grosscup and others have three locations for additional tests. Two are on the Margaret E. Jarrett heirs farm, No. 1 approximately 870 feet northeast of the well now drilling on the F. W. Shinn farm. No. 2 location is northwest of the Shinn test and 1,700 feet from the farm line. The material for the rig is on location. These operators also have a location on the J. M. Ramsey heirs farm, 4,000 feet north of the test now drilling on the Copen heirs farm.

In Malden district, Kanawha County, about 6 miles south of the Elk district Oriskany well, Godfrey L. Cabot, Inc., is deepening No. 8 on the Campbells Creek Coal Co. tract on Campbells Run and it is about due in the Onondaga limestone.

There were 20 wells completed in the lower Eastern Field during the week, but only six were producers. The initial production of these was 112 bbls. Several of the 14 gas wells appear fair. In addition there were two dry holes. The best producer for the week was in Southeast Ohio.

SOUTHEAST OHIO

In Knox County, Pure Oil Co. had a fair completion in No. 4 on the P. J. Mavis farm in Section 1, Jackson Township. It was completed in the Clinton sand and produced 102 bbls. the first day after shot.

In Belmont County there were several completions, and there is still activity in the newer pools. In SW Section 26, Richland Township, Peters & Patterson completed a test on the Andrew Semunchi farm in the Maxon sand at a depth of 1,135 feet. It is a gas well gauging about 450,000 feet a day. In the same quarter section, Robert Lewis and others completed a test on the Nick Dyken farm in the same formation and it has about 200,000 feet a day. In the SW Section 6, Washington Township, A. J. West and others completed a second test on the Isaac Sindeldicker farm in the Injun sand at a depth of 1,460 feet and it is showing for 2 bbls. a day after shot.

In Hocking County, NE Section 18, Ward Township, Preston Oil Co. completed No. 1,567 on the Sunday Creek Coal Co. property in the Clinton sand at a depth of 3,352 feet. It is a gas well gauging about 300,000 feet a day.

Washington County had several completions. In the western part of Section 11, Barlow Township, T. L. Ormiston completed a test on his own property in fee in a stray sand above the Maxon at a depth of 1,160 feet. It is a gas well with a volume of about 486,000 feet a day. In the northwest part of Lot 1,080, Palmer Township, Helen J. Burt completed No. 13 on the same farm in fee in the Cow Run sand at a depth of 665 feet. It will make about a 2-bbl. pumper, natural. On Long Run in Section 28, Newport Township, Schneider & Schneider completed a test on the T. C. and J. B. Richey farm in the First Cow Run sand at a depth of 765 feet. It produced 2 bbls. the first day after shot. On the same stream and section, McBride & Becker tested the King heirs farm in the Second Cow Run sand at a depth of 1,091 feet. It produced 1 bbl. the first day after shot.

SOUTHWEST PENNSYLVANIA

There were two gas wells completed in Southwest Pennsylvania during the week and no additional production. In East Findley Township, Washington County, the Natural Gas Co. of West Virginia completed a test on the G. W. Tilton farm at a total depth of 2,843 feet. The top of the Thirty-foot sand was at 2,803 feet with gas showing at 2,803-24 feet. The volume was about 89,000 feet a day and it was turned in the lines for test.

In Greene County, John Lantz completed deepening No. 1 on his own farm in Greene Township and shut down at a total depth of 3,031 feet. The Bayard sand was found at 2,930 feet with about 33,600 feet of gas showing at 2,932 feet. It formerly was tested in the Injun sand which had some oil along with a larger quantity of water.

In Amwell Township, Washington County, Union Gasoline & Oil Corp. has made another location for a test. It is on the L. Johns farm about 6,200 feet west of its test on the R. R. Rankin farm. The rig is being hauled in. Carnegie Natural Gas Co. has reached 1,920 feet on the R. M. Carrons farm and on the M. Manon farm 1,790 feet in the No. 2 now drilling.

In this township, the final depth of the F. K. Fawcett and others test on the J. L. and Anne Phelan farm was 3,085 feet. The top of the Fifth sand was at 3,058 feet with oil showing at 3,072-75 feet and again at 3,077-79 feet. The test filled up 1,000 feet in the 5⅛-inch casing.

In East Findley Township, Washington County, the Natural Gas Co. of West Virginia has reached 1,977 feet on the T. F. Ealy farm. The top of the Big Injun sand was at 1,907 feet with about 17,000 feet of gas showing at 1,966 feet.

In Morris Township, Washington County, James McCracken & Co. are drilling at 2,675 feet in No. 1 on the H. B. Saunders farm which is being deepened. In Greene County, Johnson & Eddy have reached 1,175 feet in No. 2 on the W. L. B. Roberts farm in Gilmore Township. At present the test is shut down fishing. In Richhill Township, Lewis & Co. are still reaming at 257 feet on the S. C. Chess farm.

WEST VIRGINIA

There was only one small producer completed in West Virginia. In Union district, Tyler County, Howard Hall and others completed a test on the Cora and Ollie Haught farm in the Cow Run sand at a depth of 967 feet. It is good for about 3 bbls. a day.

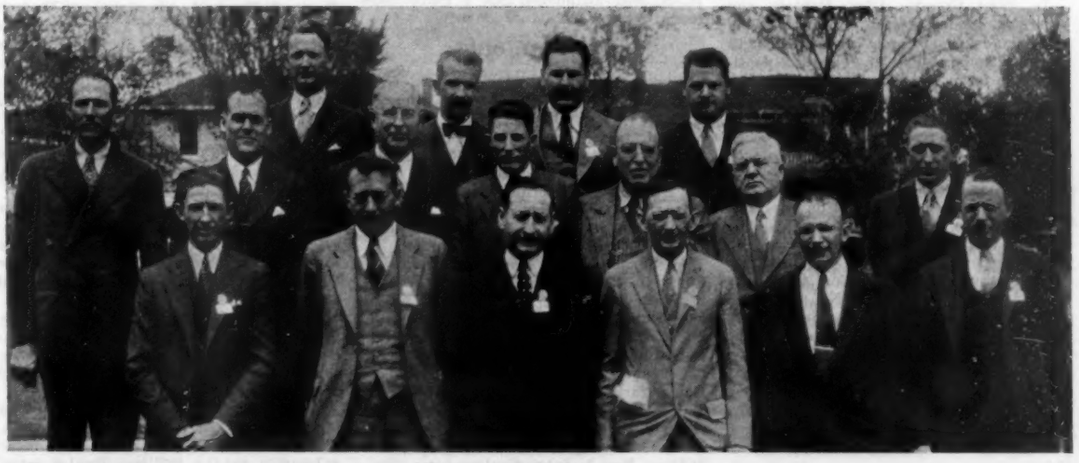
In Elk district, Kanawha County, Virginian Gasoline & Oil Corp. cleaned out No. 9 on the G. W. White farm of 30 acres and increased production from 4 to 20 bbls. a week.

Gas Wells

In Calhoun County, there were three

(Continued on Next Page)

Southwestern Gas Measurement Short Course—General Committee



*Left to right, front row: R. D. Turner, G. B. Lane, W. R. McLaughlin, D. C. Williams, Prof. W. H. Carson, J. H. Satterwhite. Middle row: E. E. Stovall, *R. W. Hendee, *Dean J. H. Felgar, L. G. Rheinberger, V. C. Jarboe, Eugene Metz, Gilbert Estill. Back row: Max Watson, A. J. Kerr, J. J. Hassler, G. W. McCullough. (*) Not member of committee*

The Southwestern Gas Measurement Short Course, held annually at the Engineering Building of the University of Oklahoma at Norman, Okla., will be held this year on April 23, 24 and 25. The dates were selected by the general committee in a meeting at Norman, January 21, and plans were made for the program for the 1935 course. University professors and representatives of manufacturers of gas measurement equipment conduct the short course each year for the benefit of members of the natural gas industry charged with responsibility of measurement of gas. Classes are open also to engineering students of the university who take advantage in large numbers of what the opportunity offers.

President W. B. Bizzell of the University of Oklahoma and J. H. Felgar, dean of engineering, give the course their enthusiastic endorsement and co-operation, while Professor W. H. Carson of the engineering faculty is active director of the course. The purpose of the project is to increase the accuracy of measurement and the efficiency of regulation for the better serving of the public, more accurate and equitable adjustment of purchase and sale of natural gas and the dissemination through the industry of correct information regarding the highly technical engineering problems involved.

Registration at the 1934 course was 390 and was representative of 17 states and four foreign countries, the latter being Argentina, Belgium, England and Persia.

The program for the 1935 course is being arranged by a committee under chairmanship of R. D. Turner of Tulsa. It will be announced in detail early in March. D. C. Williams of Ponca City is chairman of the general committee for 1935. The subcommittee chairmen are W. H. Carson, Norman, banquet, entertainment and arrangements; G. W. McCollough, Bartlesville, exhibits; Ray Roundtree, Houston, Tex., study of practical methods; Max Watson, Amarillo, publications, and E. F. McKay, Oklahoma City, registration.

Other members of the 1935 general committee are W. R. McLaughlin, Gilbert Estill, Ray E. Miller, W. F. Lowe, J. H. Satterwhite, G. B. Lane, B. L. Maulsby, and L. G. Rheinberger of Tulsa; E. E. Stovall, A. E. Higgins and D. A. Sillers of Dallas; G. P. Bunn, V. C. Jarboe and F. D. Franks of Bartlesville; Fay C. Walters of Kansas City, Mo.; E. A. Clark of Pittsburgh, Pa.; Earl Kightlinger, Shreveport, La.; John H. Baxter of Ashland, Ky.; C. B. Day of Blackwell, and B. P. Stockwell and E. F. McKay of Oklahoma City.

gas wells completed. In Lee district, Mudlick Oil & Gas Co. completed a second test on the G. W. Bennington farm in the Big Lime at a depth of 1,851 feet and it has a volume of 328,000 feet a day, natural. In Sherman district, Godfrey L. Cabot, Inc., completed a test on the Henry Kight farm in the Injun sand at a depth of 2,032 feet. It has a showing of 292,000 feet a day, natural. In Center district Howard Brothers completed a test on the L. F. Norman farm to a total depth of 2,168 feet. The Big Injun was dry but the Salt sand had a volume of 228,000 feet a day.

In Doddridge County, on Long Run of Arnolds Creek in Central district, Frank Finley drilled a second test on the Nathan Cain farm to 2,075 feet, through the Big Injun sand. It had a small showing of gas.

In Gilmer County, there was one well showing for more than fair from a shallower sand. In DeKalb district, Friendly Oil & Gas Co. completed a test on the H. C. Stalnaker farm in the Salt sand at a depth of 1,156 feet. It gauges 1,637,470 feet a day, natural, and will be tested. In Center district, McCall Drilling Co. completed a second test on the E. C. Rohrbaugh farm in the Injun sand at a depth of 2,158 feet. It had a volume of 60,000 feet a day, natural, which was increased to 160,000 feet a day after shot. Forty quarts were used.

In Pleasants County, Tyler Oil Co. drilled a test on the William Johnson farm in Union district through the Cow Run sand to 878 feet. It was dry.

In Ritchie County, Cairo Oil Co. drilled deeper No. 5 on the Patton & Wilson lease in Murphy district to 1,940 feet the Big Injun sand. It is a gas well showing for 106,000 feet a day.

In Roane County, the test of K. M. Hunt and others on the Oscar Kelly farm in Harper district was dry. The total depth was 1,852 feet, the Salt sand. The Big Dunkard extended from 1,095 to 1,180 feet. The top of the Salt sand was at 1,760 feet.

In Wirt County, Glen Roberts and others completed a test on the Withers and Vandevender and others lease in Burning Springs district at a total depth of 2,700 feet. The Big Injun sand was dry but there is a volume of about 220,000 feet of gas a day from the Second Salt sand.

Drilling in West Virginia

In Boone County, Pure Oil Co. has made a location for No. 262 on the Williams Coal Co. tract in Sherman district. Its No. 261 on this tract is drilling at 2,704 feet. This company has reached 2,670 feet on the Federal Coal Co. lease, No. 72, and 1,369 feet in No. 3 on the A. M. Prichard lease. In Washington district, Boone County Coal Corp. is down 980 feet testing their own property.

In Cabell County, there is one new well started. R. H. Adkins has started drilling on the H. S. Fraley lease in McComas district. R. H. Adkins and others are down 3,400 feet on the F. F. Starcher farm.

In Calhoun County, Hope Construction & Refining Co. is drilling deeper No. 3,315 on the E. R. Fluharty farm in Center district and is shut down at 1,797 feet testing the oil. Southeastern Gas Co. is drilling in on the Rosa Daubins farm and there is a showing of about 50,000 feet of gas a day in the Injun sand. In Sheridan district T. W. Elliott and others have reached 1,700 feet on the Guy Freed and others farm. In Lee district, F. F. McIntosh has started drilling on the W. E. Stump farm. M. F. Crawley has reached 2,125 feet on the Lester & Riggs and others lease. In Sherman district, Starcher & Richards are fishing at 1,918 feet on the Graybill heirs farm, a test. In Washington district, no new tests have been reported.

In Kanawha County, Godfrey L. Cabot, Inc., is drilling two more wells on the A. D. Huntington lease in Cabin Creek district. No. 51 is down 375 feet and No. 52 has reached 1,180 feet. In this district, the same operator has a location for No. 19 on the Quincy Coal Co. lease.

In Pleasants County, C. I. Smith and others have started drilling on the Oliver Gorrell farm in Lafayette district. Ward and others are down 1,600 feet in No. 20 on the George Varner farm in McKim district.

In Ritchie County, S. M. Summers and others have started drilling on the Ada Jones heirs farm in Murphy district. Shannon & Dawson have machine on the E. C. Dawson farm. In Grant district, Russell Morris and others have started drilling on the A. C. Scaddon farm. New York Petroleum Co. is deepening No. 17 on the J. E. Marshall farm and drilling at 1,805 feet. In Clay district, Gainer and others are drilling on the Fred Lambert farm and have reached 800 feet.

In Raleigh County, Godfrey L. Cabot, Inc., has two wells drilling on the Beaver Coal Co. tract in Slab Fork district. No. 6 is now at 1,450 feet and No. 7 at 1,040 feet.

In Roane County, United Fuel Gas Co. is drilling No. 4,541 on the Samuel Hemsley farm in Gear district and has reached 1,300 feet. In Smithfield district Spencer Natural Gas Co. has started drilling on the R. R. Young farm, about 3,000 feet north of the company's No. 1 on the O. M. Young farm. In this district, Charles Despard and others are down 2,000 feet in the second test on the Charles Starcher farm and Howard Bartlett and others have reached 2,055 feet on the C. C. Brannon farm, a test.

In Tyler County, J. W. Kerns and Austin Smith have a rig standing and are moving in tools on the Ira T. Hill farm in Meade district. In Ellsworth district, Cease Baker and others have a rig standing on the Armstrong Smith farm.

In Wirt County, W. C. Patterson has moved a machine on location for No. 24 on the C. E. Vandevender farm in Clay district. In Burning Springs district, Glen W. Roberts has completed a rig for a second test on the W. C. McConaughey farm. J. B. and W. H. Busch are down 1,000 feet on the J. M. Wilson heirs farm, same district.

Illinois Well Is Feature in Central West; Eight Completions in Central Ohio

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Feb. 4.—The feature well of the week in the Central West Field was in Ohio Oil Co.'s No. 27 on the Matilda Dyroff farm, Section 27, Sugar Loaf Township, with an initial of 257 bbls. from 446 feet, the largest producer found in the Illinois Field, for some years. In the same county, Pilot Oil Co. abandoned No. 1 Pauline Eckert No. 2 farm, SW Section 34, same township, and Lon Sanders abandoned No. 3 same farm. In Wabash County, Wabash Oil Co. abandoned No. 1 S. J. Stillwell farm, Section 1, Wabash Township, and H. A. Fox abandoned No. 1 Price heirs farm, Section 22.

CENTRAL OHIO

Eight completions were reported from the Central Ohio Field. In Summitt County, Wiser Oil Co.'s No. 1 W. E. Wright farm, Section 3, Northampton Township, was dry at 3,723 feet. Robinson and others are drilling No. 4 Phillip Doerr farm, Section 16, Lake Township. East Ohio Gas Co. has a rig in for No. 1 A. and M. Wise farm, Section 19, Greene farm, same county.

In Stark County, Hoover Development Co.'s No. 2 Harry Hoover farm, Section 9, Plain Township, is a gas well at 4,545 feet. Brendel Producing Co. is drilling No. 1 Anna R. Snyder farm, Section 4, same township. East Ohio Gas Co. has a rig in for No. 2 L. and L. Roush farm, Section 18, same township, and a rig in for No. 1 Harvey Miller farm, Section 8, same township. In Perry Township, East Ohio Gas Co. is drilling No. 1 John Graber farm, Section 23. East Ohio Gas has a location for No. 1 Peter Schembechler farm, Section 7, Jackson Township.

In Fairfield County, City Natural Gas Works is drilling No. 1 Otto M. Cinder farm, Section 1, Greenfield Township. In Pleasants Township, same company has a rig on the Mertz and Moyer farm, Section 14. Same company has a rig for No. 4 on the Charles Fauble farm, Section 2, Berne Township. Same company is drilling No, 1 James Matheney farm, Section 34, same township, and No. 1, Bowman farm, Section 34, same township.

In Muskingum County, Pure Oil Co.'s No. 3, on the E. J. Hankins farm, in Jackson Township, produced an initial of 30 bbls. at a total depth of 326 feet. In Brush Creek Township, Fritz Oil & Gas Co.'s No. 1, on the J. H. and B. F. Swingle farm, Section 28, was a gas well at 4,162 feet.

In Licking County, Blue Rock Oil Co. is drilling No. 6 Rachael Freese farm, Section 14, Fallsburg Township, Wehrle Gas Co. has a rig for No. 2 on the Flory farm, in Newark Township.

In Athens County, D. T. Orndoff's No. 1 Lewis Morris farm, Section 1, Ames Township, is a gas well at 1,588 feet. A. D. Townsend is drilling No. 2 Leo Douglas farm, Fractional Section 23, Ames Township.

In Guernsey County, M. J. Purdy's No. 1 R. O. and Ester Gibson farm, Section 16, Millwood Township, is a gas well at 1,492 feet. Preston Oil Co. is drilling on the Arie Little farm, Section 10, same township.

In Meigs County, Harrisville Gas Co.'s No. 4 Isaac Taylor farm, Section 19, Rutland Township, is dry at 875 feet, and Williams Brothers' No. 2 on the Bernie E. Saxon farm, Section 18, same township, was dry at 706 feet. Clyde Cody is drilling No. 4, Bedford Township. In Lebanon Township, Ohio Fuel Gas Co. is drilling No. 1 Mollie Bookman farm, Section 36.

In Cuyahoga County, Ferro Enamel Co. has a rig on fee property, Lot 308, Newburg Township.

In Medina County, Edward Obermiller is drilling on the Frank V. Wood property, Section 8, Liverpool Township. Ohio Fuel Gas Co. has made a location on the Clyde L. Rose farm, Lot 25, Guilford Township.

In Holmes County, Ohio Fuel Gas Co. is drilling No. 1 on the Adaline McKinley farm, Section 27, Washington Township, and has a rig on the Margaret Batdorf farm, Section 15, same township.

Pure Oil Co. is drilling No. 4 Parks Mavis farm, Lot 1, Jackson Township, Knox County. Ohio Fuel Gas Co. made a location on the William Kaylor farm, Lot 9, Jefferson Township, same county.

KENTUCKY

Only one completion was reported in the Kentucky Field, Imperial Oil & Gas Products Co.'s No. 2, on the Samuel H. Walker farm, in the Niagara Pool, in Henderson County.

INDIANA

During the past week or so, the Indiana Field showed more activity than usual. In Gibson County, Knox Engineering Corp.'s No. 1 H. Erdell farm, Section 23, Columbia Township, is a nice gas well at 1,463 feet.

In Pike County, Bruner & Abbott's No. 13 D. M. Shawhan farm, NW Section 35, Madison Township, is a gas well at 1,298 feet. M. E. Bland's No. 1 Bland farm, NE SE Section 15, Busseron Township, Knox County, is a gas well at 590 feet. M. E. Bland is drilling No. 1 C. E. Beard farm, NE SE Section 15, same township. Coffing & Dice's No. 1, on the Hetty B. Giltner farm, NW SE Section 9, same township, is dry at 1,502 feet. Meade Oil Co.'s No. 1 J. A. McAndrews farm, SW NW Section 13, Busseron Township, produced 5 bbls. at 820 feet.

In Daviess County, Midwest Development Co.'s No. 1 Ruth Akester & Co., SW NE Section 9, Harrison Township, is a gas well at 691 feet. Ben Ruble's No. 1 Bernard Gilloogy farm, NW NW Section 34, Harrison Township, is a gas well at 660 feet. Indiana Southwestern Gas Corp.'s No. 2 C. W. Brittam farm, SE SE Section 9, same township, was dry at 1,021 feet, and No. 3 is drilling on the same farm.

Completions and Tests

In Decatur County, Westport Co. is drilling Nos. 1, 2 and 3 on the Jack Boicourt farm, Section 32, Sand Creek Township.

In Dubois County, F. L. Damron is drilling No. 1, M. Schneider farm, NE NW Section 36, Marion Township, and W. W. Damron is drilling on the A. and E. Humbert farm, SW SW Section 25, same township.

In Sullivan County, Dome Gas Co.'s No. 1 J. S. Smith farm, NE NE Section 19, Curry Township, is a gas well at 312 feet, and same company is drilling No. 1 Ross Marts farm, SE NE Section 19, same township.

In Adams County, Hartford Oil Co.'s No. 2 Glendenning farm, SE NW Section 34, Harrison Township, produced 10 bbls. initial, and same company is drilling No. 3, same farm.

In Hancock County, Knightstown Natural Gas Co.'s No. 2 Blanch Adkins farm, Section 27, was a good gas well at 832 feet.

In Perry County, Hupp & French's No. 8 Walter Hafele farm, Section 21, Tobin Township, was dry in the Jett sand. Hollingsworth & Harvey are drilling No. 3 Math Gayer farm, SW NE Section 6, Anderson Township. Spaulding & Fisher are shut down at 519 feet in No. 1 on the E. D. and E. S. Yarnell farm, NW SW Section 25, Perry Township, Martin County.

In Posey County, L. R. Henley's No. 3 on the Lawrence Luigs farm, NW NE Section 23, produced an initial of 20 bbls., and same party drilled a dry hole in No. 1 on the C. C. Winterheimer farm, SE NE Section 22, same township.

In Spencer County, Ohio Oil Co. is drilling No. 1 on the George and T. Meade farm, SE SE Section 27, Hammond Township. In Hupp Township, same county, Troy Refining Corp.'s test on the M. Lorch farm, Section 11, is a gas well. Charles Dice is drilling on the William Grass, Jr., farm, also in Section 11, same township.

Chauncey Smith, Cities Service Co. and Ted Judd, Air Reduction Sales Co.

Wildcat Test in Bienville Parish Seems Promising; Rainbow Has Week Without a Completion

By J. R CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Feb. 4.—The North Louisiana and Arkansas districts in this division reported a dull and uneventful week with only eight completions, and with the exception of one wildcat in the North Louisiana area none showed any particular promise. All of the producers were in proven fields and for the first time in several weeks the new producing horizon in the Rainbow Field, Union County, Arkansas, failed to list any completions.

NORTH LOUISIANA

One small gasser and one oil well were the only two commercial wells out of five completions in this district. A dry hole in Natchitoches Parish and dusters, one each in the Blanchard Field of Caddo Parish and the Zwolle Field of Sabine Parish, comprised the list of completions. In the shallow sand of the Blanchard Field, Louana Oil & Gas Co.'s No. 1-B W. M. Hammond, Section 5-18-16, set 8-inch surface casing at 20 feet and was abandoned as dry at 957 feet. The Zwolle Chalk Rock Field in Sabine Parish lived up to its inconsistency with one dry hole out of as many completions. Creighton & Co. abandoned its No. 1 R. L. Williams, Section 6-7-11, at a total depth of 2,762 feet. A wildcat in Natchitoches Parish, Jack Lent's No. 1 Brown Lumber Co., Section 27-9-9, was abandoned in salt water at a total depth of 3,002 feet. The well had been plugged back to 2,470 feet to test a small show of gas encountered at that depth and has stood temporarily abandoned since the first of December last year. In the old Naborton area of Red River Parish, Windsor Oil Co. completed its No. 3 Jenkins in Section 11-12-11 flowing 25 bbls. daily from 2,787 feet. The gasser was added by Carbons Consolidated's No. 7 fee, Section 35-22-3e, in the Union Parish area of the old Monroe Field, as a 2,000,000-foot gasser from 2,190 feet. Rock pressure on the well registered 900 pounds.

Bienville Parish

A wildcat in the northwestern part of Bienville Parish has caused quite a ripple of excitement in this district during the past seven days. M. V. Duncan and others' No. 1 J. Hutton, Section 4-18-7, with an elevation of 223 feet, topped the Blossom sand at 2,770 feet and cored 11 feet to 2,781 feet. The first 4 feet was logged as soft sandy shale showing streaks of oil sand and with a heavy petroleum odor. The last 4 feet of the core was logged as tight limy shale, but a drill stem test at 2,770-81 feet failed to develop any returns. The well was then drilled 50 feet deeper and encountered another good show of oil on the ditch. The operators decided to drill the test to the Woodbine and the last total depth reported is 3,300 feet. It is reported on good authority that a second test to the northeast of the present well will be started immediately by a prominent South Arkansas and North Louisiana operator, same to be drilled primarily to test the Blossom sand. Other tests in that territory lead operators to believe that this vicinity may eventually prove to be the long looked-for Blossom Field in the northern part of Bienville Parish. J. Y. Steele's No. 1 Calhoun, SW SW Section 15-18-7, proved to be the high well of that territory, contacting rock salt at 1,200 feet. Two miles northeast of this test Ohio Oil Co.'s No. 1 Randoll, Section 12-18-7, checked low. A test in Section 23-19-7 checked low as did the Pan-American Oil Co.'s No. 1 Frye in Section 12-19-8. The logs on these different wildcats create a condition surrounding the present hot spot resembling the conditions leading to the discovery of the Haynesville Field, a Blossom sand producer, in Claiborne Parish.

Announcement of plans for a test in the Urania trend in Rapides Parish, just south of the Angelina-Caldwell flexure which will be equipped to drill to 8,000 feet, was made during the week by Sylvester Taylor of Tyler, Tex. The original acreage was blocked by C. D. Loe, independent operator of Shreveport, and part of the rig has been on location for some time on No. 1 Baird estate, Section 40-5n-1w. The new location will be known as Bentley Lumber Co., and located in the same section, but from the southwest corner instead of the southeast corner. The geological work on the block, Mr. Taylor having taken over about 12,000 acres of the original tract, was done by H. D. Easton, independent geologist of Shreveport. Mr. Easton expressed the opinion that instead of finding the true Nacatoch at the 6,500-foot level, a fractured zone at that level might be found corresponding to the formation found in marl in the Zwolle Field of Sabine Parish.

ARKANSAS

In Union County, Reuter Oil Co.'s No. 2 Vines, Section 29-18-15, is destined to make some kind of a producer, thereby opening a new pool of some dimensions in that county. The wildcat is about 5 miles east of the South Field and is about 4 miles south of what is known as the Grimes area. Estimates are that it will make a 20-bbl. pumper from the Nacatoch, topped at 2,154 feet. The log showed 4 feet of caprock carrying gas with 7 feet of sand showing oil and 19 feet of sandy shale with a high oil content. Most of the wells in the Rainbow Field have resumed operations after having been shut down due to inclement weather, but no completions were reported from this area during the past seven days. Numerous wells in this field have reached the pay horizon and are ready to test, and another week should register three or four more good producers.

The Arkansas district reported three completions, all of them producers. In the old Bradley Field of Lafayette County, which has been shut down for several years, W. H. Harvey's No. 1 Allen, Section 18-19-24, is a 35-bbl. pumper from 2,781 feet. Thorntree Oil Corp.'s No. 2 E. H. Beck, Section 34-15-26, in the Miller County Field east of Texarkana, is pumping 250 bbls. daily from 2,923 feet. The other producer was from the Urbana Field in Union County. McCresslen Oil Co.'s No. 1 E. King, Section 3-18-13, is rated as a 75-bbl. producer from 3,560 feet.

The new area recently uncovered west of Camden in Ouachita County is showing new signs of life after several setbacks since the discovery well was brought in. T. J. Gaughan's No. 2 M. Bragg, Section 25-13-18, contacted the Nacatoch sand at 1,360 feet, developed a good show of oil on drill stem test and has set casing above the sand. The same operators' No. 1 Cartier, recently drilled to 2,500 feet, has been taken over by J. D. Reynolds and will be plugged back to the Nacatoch horizon.

Charles Hinderliter and Frank J. Hinderliter, of the Hinderliter Tool Co.

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

BIENVILLE PARISH

M. V. Duncan et al's No. 1 Hutton, 400 ft. S, 330 ft. E, NW cor. Sec. 4-18-7.
Drlg. 2,740 ft.
Saline Drlg. Co.'s No. 1 Pardee, Sec. 27-14-6.
S.D. 2,670 ft.

BOSSIER PARISH

Howard & Baird's No. 1 Gold, 150 ft. S and E, NW cor. Sec. 36-20-13.
S.D. 1,126 ft.
W. A. Kirkland's No. 1 Jarrett & McKeller, 330 ft. N and W, S cor. NW NW Sec. 2-21-13.
Set 10-in. 43 ft.
Leonard Co.'s No. 1 Pearson, 250 ft. S and E, of C Sec. 22-21-14.
S.D. for fuel 2,408 ft.
Scott & Howard's No. 1 Sherrill, Sec. 13-19-12.
Partly rigged up and S.D.
R. L. Skidmore et al's No. 1 Davis, Sec. 12-18-13.
S.D. 1,615 ft.

CADDO PARISH

W. T. Bell et al's No. 1 Bostick, 1,320 ft. E, 660 ft. N, SW cor. Sec. 12-22-16.
S.D. 2,540 ft.
Burkett O. & G. Co.'s No. 1 Lindholm, 400 ft. S and E, NW cor. NE SE Sec. 16-17-14.
S.D. 1,046 ft., repairing rig.
A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SE Sec. 4-14-16.
S.D. 2,128 ft.
Shreveport Oil Corp.'s No. 4-C Muslow, 1,720 ft. E, 100 ft. N, SW cor. Sec. 4-20-15.
Coring 2,150 ft.
Leonard Co.'s No. 4 S. P. Harrell, 220 ft. N and W, SE cor. NW SW Sec. 2-21-16.
S.W. and abd. 1,675 ft.
Set 5 3/16-in., 1,670 ft.
Tooke & Reynolds' No. 1 Levy, 330 ft. N and W, SE cor. NE Sec. 16-20-15.
Testing 2,210 ft.
Tooke & Reynolds' No. 2 Levy, 300 ft. S and E, NW cor. SE NE Sec. 16-20-15.
Derrick pattern.
J. L. Roberts Drlg. Co.'s No. 1 Lane & Simon, 480 ft. E, 150 ft. S, NW cor. SW Sec. 15-20-15.
W.O.S.R. 2,200 ft.
Press & Lambert's No. 1 Lane & Simon, 166 ft. S, 1,124 ft. E, NW cor. SW Sec. 15-20-15.
W.O.S.R. 2,196 ft.

CATAHOULA PARISH

T. R. Hincy's No. 1 La. Central Lbr. Co., Sec. 32-9-6e.
S.D. for D.S. 1,541 ft.

DESOTO PARISH

Bayou Pierre Oil Co.'s No. 1 B. Y. Wemple, C SE NE SW Sec. 14-12-11.
W.O.S.R. 2,731 ft.
Century O. & Drlg. Co.'s No. 1 Morton, 300 ft. N and E SW cor. SE NE Sec. 27-11-14.
S.D. 2,612 ft.
Dempsey & Manziel's No. 1 Thigpen, 275 ft. S, 330 ft. W, NE cor. SW NE Sec. 32-13-13.
Testing 1,745 ft.
DeSoto Pet. Co.'s No. 1 B. Y. Wemple, C S½ SE NE SW Sec. 14-12-11.
S.D. 2,073 ft.
E. L. Foster's No. 1 Youngblood, Sec. 9-11-14.
S.D. 1,830 ft.
Bailey Gaunce's No. 2 B. F. Jenkins, Sec. 35-13-12; O.W.D.D.
Drlg. 2,230 ft.
Leslie Prod. Co.'s No. 1 Ramsey, 150 ft. N and W of C Sec. 36-11-11.
Rigging up.
Ben F. Smith's No. 1 Bonds, 200 ft. E, 560 ft. N, SW cor. Sec. 22-12-11.
S.D. 2,749 ft.
National Oils, Inc.'s No. 1 B. Y. Wemple, NW SW Sec. 14-12-11.
S.D. 120 ft.

EAST CARROLL PARISH

Century Oil & Drlg. Co.'s No. 1 Olive Dell, 660 ft. S, 300 ft. W, NE cor. Sec. 56-21-21e.
S.D. 150 ft.

LA SALLE PARISH

J. B. Collins, tr.'s No. 2 Urania, Sec. 7-10-2e.
Drlg. plug 1,520 ft.
Fred Graham's No. 1 Urania, 300 ft. N, 150 ft. E, SW cor. SW NW Sec. 18-20-2e.
W.O.S.R. 1,521 ft.
F. A. Trichello's No. 1 Urania, Sec. 3-9-1e.
Reaming to bottom 1,521 ft.

NATCHITOCHES PARISH

Clyde Crichton's No. 1 Friedman Est., 406 ft. N, 428 ft. E, SW cor. Sec. 52-7-6.
S.D. 2,095 ft.
Jack Lent's No. 1 Brown Lbr. Co., 400 ft. S, 300 ft. E, NW cor. NE SW Sec. 27-9-13.
S.W. and abd. 3,002 ft.
Missouri Drlg. Co.'s No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. Sec. 5-10-10.
S.D. 1,933 ft.
Roy A. Raines et al's No. 1 Raines est., 330 ft. N and E, SW cor. Sec. 8-9-10.
S.D. 3,150 ft.

OUACHITA PARISH

Hatcher & Evans' No. 11 fee, 2,065 ft. S, 3,394 ft. E, NW cor. Sec. 17, in Sec. 41-19-4e.
Drlg. 1,260 ft.

RAPIDES PARISH

C. D. Loe, trustee's No. 1 Baird Est., SE cor. Sec. 40-5n-1w.
Arranging to resume drilling.

RED RIVER PARISH

Sterling O. & R. Co.'s No. 1 Long Bell, 150 ft. N and W, SE cor. NE SE Sec. 19-13-9.
S.D.; changing rigs, 1,104 ft.
Windsor Oil Co.'s No. 3 Jenkins, 1,905 ft. E, 660 ft. N, SW cor. Sec. 11-12-11.
Comp.; flowing 25 bbls., 2,787 ft.

SABINE PARISH

H. J. Brothers et al's No. 1 Edwards, 300 ft. S and W, NE cor. SW NW Sec. 29-9-13.
Pumped off; S.D.; W.O. 1,887 ft.
R. B. Campbell et al's No. 1 Cook Land Co., 150 ft. N, 300 ft. W, SE cor. NW NW S.D. 2,130 ft.
Helena Oil & Gas Co.'s No. 1-B Graham, 330 ft. S and W NE cor. NE NW Sec. 30-9-13.
S.D. 2,000 ft.
Lawson-Leavell's No. 1 Whitney Corp., 330 ft. N and E, SW cor. NE SW Sec. 5-9-13.
Whipstocking 2,742 ft.
Jack Lent's No. 1 Williams, Sec. 13-7-11.
Set 10-in. 62 ft.; S.D. 440 ft.
Dr. O. B. Hicks' No. 1 Neal, SE SW SE Sec. 18-9-12.
Set 10-in. 40 ft.
Strickland et al's No. 1 Whitney Corp., Sec. 32-10-12.
Set 8-in. 1,445 ft.; T.D. 1,448 ft.

TENSAS PARISH

Schumacher, tr.'s No. 1 Curry, Sec. 39-11-12e.
Arranging to deepen 3,750 ft.

ARKANSAS

ARKANSAS COUNTY

Grand Prairie Realty Co.'s No. 1 Fischer,

(Continued on Page 84)

Crude Production

Estimated daily average crude production for the week ending January 26 follows:

NORTH LOUISIANA

	Bbls.
Bellevue	490
Caddo, light	4,600
Caddo, heavy	1,685
Converse	1,200
Cotton Valley	465
DeSoto and Red River	1,385
Elm Grove	305
Haynesville	3,670
Holly	165
Homer	2,660
Pleasant Hill	195
Sarepta-Carterville	570
Urania	3,245
Zwolle	3,200
Total	22,585

SOUTH ARKANSAS

Champagnolle	3,400
El Dorado	2,210
Lisbon	315
Miller County	1,755
Nevada	935
Smackover, light	2,200
Smackover, heavy	18,025
Stephens	500
Urabana	2,150
Total	31,490

Big Wells in Haury-Burrton Pool Continue to Be Feature in Kansas; Test Discovery Wells

By JAMES McINTYRE

More big wells in the Haury-Burrton Pool in Reno County, Kansas, the largest pumping 3,397 bbls. in 24 hours without an acid treatment comprised the feature news from Kansas in the past week. Production was reduced from an average of 140,975 bbls. per day to 137,225 bbls. per day but the Haury-Burrton for the first time was permitted to produce over 20,000 bbls. per day.

Two recent pool openers were given potential tests, Twin Drilling Co.'s No. 1 Rolfs, C SW NW SW Section 13-17-9w, in Ellsworth County, was acidized in Siliceous lime at 3,200-05 feet and produced 1,640 bbls. in 24 hours. Imo Oil & Gas Co.'s No. 1 Sperling, C SE NE NE Section 23-22-2w, in northern Harvey County, produced 358½ bbls. in the first five hours of a 24-hour potential test from Hunton lime at 3,279-3,339 feet. The oil graded 34.6 degrees at 68° F. with a trace of water and sediment.

Estimated Production

Estimated daily average production of Kansas for the week ended February 2 and for the preceding week follows:

	Barrels	
	Feb. 2	Jan. 26
Hollow	6,400	6,550
Rits-Canton	9,425	9,625
Voshell	5,675	6,375
Johnson	2,480	2,392
Nikkell	6,075	5,925
Sedgwick County	9,175	9,325
Ellsworth County	1,692	3,537
Barton County	1,621	1,692
Rice County	18,342	19,002
Reno County	21,145	23,648
Ellis County	291	593
Kingman County	975	1,054
Stafford County	1,352	1,940
Russell County	10,222	7,000
Greenwood County	11,000	11,000
Butler County	18,950	18,900
Other pools	12,405	12,417
Total Kansas	137,225	140,975

Sumner County

D. J. Wilson and others have ponds dug for a wildcat test, No. 1 Clark, 1,320 feet from west line and 25 feet from the north line of NW Section 15-35-1w, Sumner County.

Cowley County

Ben Gralapp's No. 1 Wycoff, SW cor. Section 9-34-3, Cowley County, was dry and abandoned at 1,952 feet. It had a showing of gas at 665 feet.

Sedgwick County

D. Lauck and Shoreline Oil Co. were building rig for No. 2 Jordan, SE SW SE Section 6-28-1w, Sedgwick County. Dickey Oil Co. was building rig for No. 2 Law, 150 feet north and 612 feet east of C Section 20-28-1e. Gillespie and others made a location for No. 1 Yaw, 425 feet east and 6 feet north of C Section 20-28-1.

Shell Petroleum Corp.'s No. 9 Lygrisse A, SE NW SE Section 15-26-2, an old well deepened to Viola lime at 3,186-88 feet, swabbed 200 bbls. of oil and 15 bbls. of water in 12 hours. It was then acidized.

Butler County

Hammer & McClain completed No. 1-A Suits, 660 feet from south line and 330 feet from west line of NW Section 10-27-4. It had been acidized in Kansas City lime at 1,996-2,014 feet, and pumped 202 bbls. of fluid, 12 per cent water.

Magnolia Petroleum Co. completed No. 9 Suits, 1,120 feet from the north line and 600 feet from the west line of SW Section 10-27-4. It pumped 62 bbls. in 24 hours after an acid treatment at 2,005-09 feet.

H. H. Patton's No. 4 Schriver, C S half SE Section 33-27-6, was abandoned. It produced 110 bbls. of oil and then went to water after Viola lime at 3,099-3,108 feet had been acidized. It was plugged back to 2,150 feet and 5-inch pipe set at 2,122 feet, but it swabbed only water.

Sheldon and Wixson spudded No. 1 Moore, NW SE SE Section 36-24-3.

Greenwood County

O. V. Paul and others' completed No. 1-A Wygle, NW cor. SW Section 12-27-10, Greenwood County, a 40-bbl. pumper from Mississippi lime at 1,955-68 feet which had been acidized.

OKO Oil Co.'s No. 9 Keidler, 600 feet from north line and 200 feet from the west line of NE Section 15-23-13, was dry and abandoned at 1,828 feet.

Shaffer & Howell were drilling at 965 feet in No. 1-A Sauder, SE SE NE Section 16-23-13. Young & Reynolds had a fishing job at 800 feet in No. 1-A Adams, 470 feet north and 250 feet east of C Section 7-22-13.

Reno County

The Haury-Burrton Pool in Kansas was allowed to produce over 20,000 bbls. per day in the past week, a small part of its potential production, but the most oil it has produced in any week up to this time.

Barnsdall Oil Co.'s No. 6 Sabin, SE cor. Section 11-23-4w, pumped 428 bbls. in 24 hours from Hunton lime at 3,610-21 feet and was then acidized.

Wilcox Oil & Gas Co. completed No. 1 Neufeldt, SW SW NW Section 12-23-4w. It had been acidized in Hunton at 3,618-23 feet and pumped 1,623 bbls. of oil in 24 hours.

Gypsy Oil Co. and Empire Oil & Refining Co.'s No. 1 Sabin, NW cor. Section 13-23-4w, swabbed 35 bbls. of oil and 50 bbls. of water in 12 hours from Hunton at 3,611-12 feet. It was then acidized.

Olson Oil Co. and Shell Petroleum Corp.'s No. 3 Downie, SW SE NE Section 14-23-4w, had Hunton lime at 3,597-3,606 feet and pumped and flowed 2,468 bbls. in 24 hours. It was not completed.

Olson Oil Co. and Shell Petroleum Corp.'s No. 2 Harner, SE SE SW Section 14-23-4w, swabbed 85 bbls. per hour from Hunton at 2,593-3,611 feet.

Amerada Petroleum Corp.'s No. 2 Wilson, NE SW SW Section 23-23-4w, was acidized in Hunton at 3,596-3,606 feet and pumped and flowed 3,397 bbls. in 24 hours. It was not completed.

Marathon Oil Co.'s No. 1 Vansickle, NE NE NW Section 23-23-4w, flowed 600 bbls. in six hours from Hunton at 3,589-3,604 feet after a second acid treatment.

Marathon Oil Co. completed No. 2 Vansickle, SW SE NW Section 23-23-4w, which pumped 1,312 bbls. in 24 hours following an acid treatment in Hunton at 3,602-21 feet.

Sinclair Prairie Oil Co.'s No. 2 Stalcup, C SE NW Section 36-23-4w, was completed in Chat at 3,269-3,375 feet. It pumped 139 bbls. after an acid treatment.

New work started in the Haury Burrton Pool included Barnsdall Oil Co.'s No. 8 Sabin B, SE NE NE Section 11-23-4w, cellar; Ledo Oil Co.'s No. 2 Neufeldt, SW NW NW Section 12-23-4w, cellar; Olson Oil Co. and Shell Petroleum Corp.'s No. 9 Downie, SW NW NE Section 14-23-4w, location; No. 10 Downie, SE NW NE Section 14, location; Amerada Petroleum Corp.'s No. 3 Wilson, SE NW SW Section 23-23-4w, cellar; Olson Oil Co., Shell Petroleum Corp. and Continental Oil Co.'s No. 9 Blake, SW NE SW Section 23-23-4w, location.

Rice County

Hipple and others' No. 2 Brown, NE NW NE Section 10-21-6w, Rice County, was completed in Chat at 3,385-3,421 feet. It was acidized and pumped 430 bbls. in 24 hours.

Day and others have cellar dug for No. 1 Mason, NW NE NE Section 28-21-7w.

Roy Ramsey's No. 2 Hilton, SE NE SW Section 6-20-9w, had Siliceous lime at 3,293-3,305 feet. It swabbed 72 bbls. of oil in nine hours. It was then acidized.

Gypsy Oil Co. was building rig for a wildcat test, No. 1 Kesling, NW NW SW Section 10-20-9w.

Sinclair Prairie Oil Co. completed No. 4 Volkland, SE SW SE Section 20-19-9w, in Siliceous lime at 3,220-39 feet. It was acidized and produced 495 bbls. in 24 hours. No. 2 Volkland, SW SE SE Section 20, which pumped 664 bbls. in 24 hours and which was then acidized, had not been tested.

Phillips Petroleum Co.'s No. 2 Link, SW SW SW Section 21-19-9w, was acidized at 3,212-35 feet and pumped 42 bbls. the first hour.

Marathon Oil Co. made a location for No. 1 Grove, SE NE NW Section 29-19-9w, a wildcat.

Russell County

It was an unusually quiet week in Russell County. The sole completion was C. Carey's No. 1 Whitman, CNL NW NE SW Section 27-13-14w, which is a 137-bbl. initial pumper from Siliceous lime at 3,268-74 feet, which was acidized.

Hartman & Blair have cellar dug for No. 1 Rusch, NW cor. Section 34-13-14w, and were moving in rotary for No. 1 Garrett, SW SW NW Section 24-13-12w, the latter a wildcat. Murphin and others spudded No. 1 Funk, SW cor. Section 19-12-13w, a wildcat.

McPherson County

Continental Oil Co. and others completed No. 1 Wenger, NW NW NE Section 32-21-1w, McPherson County, in Hunton lime at 3,306-25 feet. It pumped 324 bbls. in 24 hours after an acid treatment.

Roth & Faurot abandoned their wildcat test, No. 1 Bestvater, SE SW SE Section 23-20-1w, at 3,480 feet. It was a hole full of water from Wilcox sand at 3,476-80 feet.

Roth & Faurot are rigged up to start No. 4 Swanson, SW SW NE Section 13-19-3w.

Rush County

In Rush County W. M. Moore's No. 1 Mohr, C SE Section 15-18-16w, was completed as a gas well. It made 36,500,000 feet of gas, with 1,020 pounds rock pressure from 3,464-70 and 3,475-80 feet, total depth 3,520 feet.

Ellsworth County

Magnolia Petroleum Co. made a location for No. 4 Andrea (twin), 330 feet from the north line and 1,115 feet from west line of SW Section 7-17-10w, Ellsworth County, Atlantic Oil Producing Co. was building rig for No. 1 Janssen, SW SE NW Section 13-17-9w.

The second well to show good production in the new Rolfs Pool is Texas Co.'s No. 1 Rolfs, NW SW SW Section 13-17-9w. It had the top of the Simpson at 3,183 feet; set 6-inch pipe at 3,207 feet and had Siliceous lime at 3,209-12½ feet. The hole filled with oil in two hours

(Continued on Page 86)

Wildcat Operations in Kansas

Week Ending February 2

(Descriptions are East unless marked otherwise)

BARBER COUNTY

Sam Jarvis et al's No. 1 Morrisse, C SE NE Sec. 23-30-10w.
Rig.

Southern Drlg. Co. et al's No. 1 Davis, 810 ft. from W and 330 ft. from S lines of NE Sec 13-34-15w.
S.D. 2,865 ft.

BARTON COUNTY

D. I. Hall et al's No. 1 Arnold, SE SE SW Sec. 19-18-15w.
Rig.

C. L. Price et al's No. 1 Ehrlich, NW SE Sec. 10-16-12w.
T.D. 360 ft.; fishing.

Suppes & Witt's No. 1 Hayes, SW cor. Sec. 6-16-15w.
Location.

Treleaven & Brimm et al's No. 1 Haas, SW cor. Sec. 30-18-15w.
6-in. 3,405 ft.; Reagan sand 3,585 ft.; pay 3,603-06 ft., T.D.; flowing by heads; est. 1,000 bbls. per day.

BUTLER COUNTY

Gaines et al's No. 1-A McKinley, NE NE SE Sec. 19-29-4.
Acidized K.C. lime 1,890-1,950 ft.; flowed 25 bbls. oil, 25 bbls. wtr.; reacidizing.

ELK COUNTY

Lassen's No. 1 Ferguson, SE SE SW Sec. 21-30-8.
1,760,000 ft. of gas 2,056-5 8ft.; 5-in. csg. 2,160 ft.; sand 2,169-76 ft.; T.D. 2,181 ft.; acidized.

ELLSWORTH COUNTY

Carter Oil Co. et al's No. 1 Teuber, 440 ft. N and W of C Sec. 26-17-9w.
Set 12-in. pipe 30 ft.; T.D. 360 ft.

Pryor & Lockhart's No. 1 Gregory, SE SE SE Sec. 19-16-8w.
Building rig.

Pryor-Lockhart et a's No 1 Gregory, SE cor. Sec. 19-16-8w.
Location.

HARVEY COUNTY

O. J. Connell et al's No. 1 Roth, SW cor. Sec. 16-22-2w.
Spudded and S.D.

Imo O. & G. Co. et al's No. 1 Sperling, SE NE NE Sec. 23-22-2w.
Hunton lime 3,279-3,341 ft.; swbd. 180 bbls. in 24 hrs.; acidized.

Wenzel et al's No. 1 Schrag, NW SE Sec. 24-22-3w.
T.D. 587 ft.; S.D. for csg.

McPHERSON COUNTY

Lario O. & G. Co.'s No. 1 Base, SW cor. Sec. 22-20-2w.
Chat 2,981 ft.; standardizing at 2,983 ft.

L. W. Prunty et al's No. 1 Davis, NE cor. Sec. 6-22-1w.
Chat 2,922 ft.; drlg. 2,928 ft.

Roth-Faurot et al's No. 1 Bestvater, SE SW SE Sec. 23-20-1w.
6-in. 3,465 ft.; Wilcox 3,476 ft.; T.D. 3,485 ft.; H.F.W.; abd.

Stafford et al's No. 1 Krehbiel, NW NW SE Sec. 27-21-3w; (O.W.D.D.).
C.O. at 2,080 ft.

NESS COUNTY

Texas Co. and Gypsy Oil Co.'s No. 1 Goodman. C SW SW Sec. 21-19-23w.
Mississippi lime 4,374 ft.; drlg. 4,460 ft.

PRATT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Prentice, C SE NW Sec. 18-28-14w
K.C. lime 4,023 ft.; coring 4,185 ft.

RENO COUNTY

Foraker et al's No. 1 Hiett, SE SW NE Sec. 34-24-4w.
T.D. 1,285 ft.; S.D.

Kessler, Their and Skelly's No. 1 Bigger, NE SE SW Sec. 29-23-6w.
Drlg. 2,608 ft.

Privett Drlg. Co.'s No. 1 Crotts, NE NW NE Sec. 27-26-10w.
8-in. 3,312 ft.; S.D. 3,337 ft.

RICE COUNTY

Allison & Fitzwilliams et al's No. 1 Stumps, NW NW SW Sec. 4-18-10w.
Spudded.

Foraker, Nickerson et al's No. 1 Lyons, SE NW Sec. 27-20-8w
T.D. 1,660 ft.; running 10-in. csg.

(Continued on Page 82)

Oklahoma Production Reduced to 441,325 Bbls. Fitts Pool Is Granted Higher Daily Allowable

By JAMES McINTYRE

Oklahoma production was cut from 509,950 bbls. per day to an average of 441,325 bbls. per day in the week ending February 2, Oklahoma City reducing its crude output from 186,800 bbls. to 117,600 bbls. and the Seminole area dropping from 68,950 bbls. to 57,705 bbls. per day. The Fitts Pool was given a chance to produce more of its big potential production and in the past week supplied 14,625 bbls. per day of its more than 100,000 bbls. of potential production.

Forty-four wells in the Fitts Pool were granted an allowable of 226,995 bbls. production in January, a daily average of 7,322 bbls. per day. Twenty-eight wells on which potentials were taken showed a combined potential production of 102,065 bbls. per day or an average potential of 3,645 bbls.

FITTS POOL POTENTIALS

Operator and lease—	January potential (bbls. per day)
Blackstock:	
Craddock No. 1	4,827
Craddock No. 2	4,568
Craddock No. 3	5,076
Dawes Harden No. 2	3,864
Dawes Harden No. 3	3,419
Dawes Harden No. 4	4,195
Carter Oil Co.:	
Lucy Brown No. 1	4,413
Craddock No. 1	5,436
D. Harden No. 2	3,801
D. Harden No. 3	3,233
C. T. Richards No. 2	2,928
Crosbie et al:	
Dawes Harden No. 1-A	3,818
Dawes Harden No. 2	3,045
Dawes Harden No. 3	4,395
Deep Rock:	
Dawes Harden No. 1	4,122
Loual Drilling Co.:	
Craddock No. 2	302
A. Harden No. 2	4,329
Magnolia:	
J. E. Craddock No. 1	260
Dawes Harden No. 3	787
Tom Norris No. 2	2,234
Tom Norris No. 3	4,835
Tom Norris No. 4	5,000
E. H. Moore et al:	
Akers No. 1	5,120
G. B. Smith No. 1	3,378
H. T. Wirick No. 3	2,374
C. Woodruff No. 1	3,016
Stanolind:	
A. J. Harden No. 1-A	4,229
P. A. Norris No. 1	5,061
Total	102,065

Allowables: January 1-13, inclusive—100 bbls. per day. January 14-31, inclusive—10 per cent. Factor 1.8.

There was a very pronounced lull in completed work and new operations in the past week in review in Oklahoma, the Fitts Pool showing the most activity.

The Sinclair Prairie Oil Co. brought in four wells in the South Burbank Field in Osage County. No. 2, C NE SE NE Section 16-25-6, South Burbank, had sand at 2,845-62 feet, and started at 338 bbls. the first 24 hours and 575 bbls. in 48 hours. The company's No. 4, C SW NW NE Section 21-25-6, got sand at 2,835-71 feet which was shot with 30 quarts, the well making 20 bbls. of oil and 5 bbls. of water in 24 hours. The company's No. 5, C NE NW NE Section 21-25-6, Fairfax Pool, made 75 bbls. initial production from sand at 2,800-32 feet which had been shot, and No. 5 in the NW NE NW Section 22-25-6, started at 50 bbls. from sand at 2,744-71 feet, which had been shot.

The big leasing play in the Graben area of Pontotoc, Coal, Johnston and Murray Counties has subsided and attention has turned to southwestern Oklahoma where many operators are seeking to get leases in Jackson County and in Greer County. The Gypsy Oil Co. opened a pool near Altus in Jackson County, which shows both oil and gas and at reasonably shallow depth. Kay County is also coming in for a lot of leasing in blocks.

New Wells in Polo Pool

In the Polo Pool, Noble County, Stanolind Oil & Gas Co.'s No. 4 DeVore, NE SW NW Section 27-22-2w, made 253 bbls. in 3½ hours from Wilcox sand at 4,889-4,903 feet. Sinclair Prairie Oil Co.'s No. 4 Smith, NE SE NE Section 28-22-2w, flowed 629 bbls. in six hours from Wilcox sand at 4,881-94 feet. Stanolind Oil & Gas Co.'s No. 5 Voss flowed 1,081 bbls. in 24 hours while drilling Wilcox sand at 4,805-16 feet and was still drilling at 4,822 feet.

Crescent Pool

In the Crescent Pool in Logan County, the Texas Co.'s No. 3 Denny, NE NE SE Section 33-17-4w, had Wilcox sand at 6,088-6,116 feet and flowed 810 bbls. in six hours. Gypsy Oil Co. and Carter Oil Co.'s No. 3 Knowles, SW SW NW Section 34-17-4w, found Wilcox sand at 6,177-6,220 feet. It flowed 120 bbls. and then quit.

Continental Oil Co. made a location for No. 1 Young, SE SE NW Section 31-14-3w, in the Edmond Field, Oklahoma County.

Magnolia Petroleum Co. made a location for No. 2 Rice, SE SE NE Section 11-14-3, West Chandler Field in Lincoln County.

Chandler Pools

Sinclair Prairie Oil Co.'s interesting wildcat north of the West Chandler Field, No. 1 Hoyt, NW SW NE Section 5-14-3, was shot with 20 quarts in dolomite at 5,047-62 feet and swabbed 105 bbls. in 22 hours. Preparations were being made to acidize. It was drilled to 5,113 feet and plugged back to 5,084 feet. It showed oil in the first Wilcox sand but not in the lower Wilcox.

Slick-Urschel, Inc., was moving in material for No. 2 Althoff, SE NE NW Section 18-14-4, Chandler Field.

In the Oklahoma City area, Charles E. Carter and others' No. 1 Suenram, NE cor. Section 7-13-3w, had Wilcox sand at 6,837 feet and cored from 6,840 to 6,858 feet, the core showing oil. Seven-inch casing was set at 6,610 feet.

Pat King has cellar dug for No. 1 Chiles, NW NE NW Section 27-11-3w, in the Oklahoma City Pool.

The Denver Producing & Refining Co.'s famous 11,230-foot wildcat, No. 1 A-dah Noe, NW SW SW Section 34-10-10w, Caddo County, has been agitated with mud hog pump and been producing 100 bbls. of oil every other day from sand at 9,900-10,000 feet.

Estimated Production

Estimated production by pools in Oklahoma for the week ended February 2 and for the preceding week follows:

	Barrels Feb. 2	Barrels Jan. 26
Allen	8,575	8,525
Asher-West Asher	1,400	1,525
Burbank	8,800	8,750
South Burbank	9,500	9,500
Balance of Osage	27,000	27,000
Blackwell	4,850	4,750
Bristow-Slick	9,500	9,500
Crescent	4,275	5,225
Cromwell	4,450	4,500
Cushing-Shamrock	13,000	13,000
Duncan district	4,100	4,100
Chandler	6,000	6,000
Fish	8,225	7,950
Fitts	14,625	4,275
Gray	1,650	2,025
Graham	3,600	3,500
Healdton	9,100	9,000
Hewitt	4,800	4,750
Holdenville	2,000	2,000
Keokuk	1,525	850
Konawa	2,400	2,075
Lucien	10,325	8,975
Marshall-Lovell	1,000	1,000
Oklahoma City	117,600	186,800
Papoose	1,250	1,250
Saskawa and townsite	2,025	2,575
Sholem-Alechem	4,000	4,000
Seminole Field:		
Bowlegs	10,300	12,325
Carr City	3,650	5,250
Earlsboro	8,550	9,675
East Earlsboro	7,325	8,225
South Earlsboro	775	1,100
Little River	11,660	13,800
East Little River	525	575
Maud	1,575	1,550
Mission	2,475	2,675
Seminole	7,825	9,625
East Seminole	1,000	1,050
Searight	2,050	3,000
Total Seminole	57,705	68,950
St. Louis-Pearson	17,600	19,600
Tatums	5,000	5,000
Tonkawa-Garber-Thomas	6,000	6,000
Wewoka	4,000	4,000
Yale-Jennings	4,750	4,800
Other pools	60,695	58,200
Total Oklahoma	441,325	509,950

Greater Seminole

The Amerada Petroleum Corp. and others' wildcat, No. 1 Jaynes, NW NW SW Section 20-10-10, Okemah district, Okfuskee County, a Wilcox sand test, found a gas sand at 2,938-53 feet and a 30,000,000-foot gas production. The crew was running 8-inch pipe to 2,940 feet; the gas will be killed and drilling continued.

The Continental Oil Co.'s No. 1 Porter, 660 feet from the south and 990 feet from east line of the SW Section 7-9-5, Earlsboro district, was completed in Hunton lime at 4,108-24 feet, total depth 4,126 feet. It was acidized but is a small well.

Location was made for Iglehart's No. 1 Roush, NE NE SW Section 20-9-5.

The Potco Oil Co. completed two wells in Section 12-9-8, Seminole County, both of which were large gas producers. No. 1 Dixon, SW NE NW Section 12-9-8, had Cromwell sand at 3,447-72 feet. It flowed 35 bbls. of oil and 50,000,000 feet of gas in 24 hours on its completion test. No. 2 Dixon, a twin to No. 1, found a sand at 1,455-83 feet which is a 45,000,000-foot gasser. It flowed 35 bbls. of 50 gravity oil or distillate when it first came in.

Amerada Petroleum Corp. made a location for No. 1 Adams, NE NE SW Section 31-9-9, in the Papoose-Gilcrease-Fuhrman area.

Magnolia Petroleum Co. abandoned No. 2 Williams, NW SW NW Section 18-8-7, Seminole County. It had a hole full of water from Cromwell sand topped at

Wildcat Operations in Oklahoma

Week Ending February 2

NORTHERN OKLAHOMA

BECKHAM COUNTY

Fred Coogan et al's No. 1 Shelton, SW cor. Sec. 33-10-25w.
Drlg. 1,650 ft.

CADDO COUNTY

H. W. Lee et al's No. 1 Stacey Ferrell, SW NE NE Sec. 2-6-13w; (2,000-ft. test).
Drlg. 1,632 ft.

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w.
T.D. 11,230 ft.; C.O. to 10,000 ft.; flowing by heads 100 bbls. oil every other day.

CLEVELAND COUNTY

Sinclair Prairie et al's No. 1 Franklin, SE NW SE Sec. 21-10-2w.
Rigging up rotary.

COAL COUNTY

J. D. Petty Oil Co.'s No. 1 McMillan, SW NW NE Sec. 16-1s-8.
Running 4-in. csg. at 1,110 ft.

GARVIN COUNTY

Anderson & Kerr's No. 1 Riley, SE SE NW Sec. 2-4-1w (5,800-ft. test).
Drlg. 4,850 ft.

Charles Carter and W. S. Key, Inc.'s No. 1 Wood, C NW SW SE Sec. 5-4-3e.
Set surface pipe.

National Prod. Co.'s No. 1 Littrell, NE NE NE Sec. 31-2-3w.
Drlg. 1,120 ft.

George L. Pace's No. 1 Smith, SW NE Sec. 35-1-1.
Location.

GRADY COUNTY

Carter Oil Co. and Magnolia Pet. Co.'s No. 1 Harrison C-34, C NW NW Sec. 28-3-5w.
T.D. 8,963 ft.; cmt. plug placed at 5,200-5,450 ft.

GRANT COUNTY

Helmerich & Payne's No. 1 Crouse, C NE SW Sec. 29-25-8w.
Mississippi lime 5,805 ft.; S.D. 5,920 ft.

HUGHES COUNTY

Dandridge & Crane's No. 1 Mead, NW NW NE Sec. 17-5-9.
10-in. 270 ft.; T.D. 750 ft.; S.D.

Freeman et al's No. 1 Kite, NW NW NE Sec. 3-6-10.
Sand 596-98 ft.; show oil; S.D. for pipe.

Turner et al's No. 1 Williams, SW cor. Sec. 35-7-10.
Rigging up rotary.

KAY COUNTY

Harris & Haun's No. 1 Schuessler, C NW SW Sec. 3-28-2.
U.R. to 2,010 ft.; T.D.

Bay Oil Co.'s No. 1 Holden, SW SW SE Sec. 14-28-3.
5-in. 2,945 ft.; drlg. plugs.

Lancer Oil Corp.'s No. 1 Hugo, SE NW NW Sec. 22-28-5.
Location.

S. R. McCorkle et al's No. 1 Smith, SW cor. Sec. 6-26-4.
S.D. 457 ft.

KINGFISHER COUNTY

Black Gold Oil Co.'s No. 1 Cole, C SW NE Sec. 24-18-5w.
Drlg. 4,925 ft.

LINCOLN COUNTY

Tom Bennett et a's No. 1 Bolby, C SE SW Sec. 27-12-2.
Cored 5,065-81 ft.; S.D. for csg.

Derrickson and Reserve Pet. Co.'s No. 1 Law, SE SW NE Sec. 25-14-3.
Location abd.

Chester L. Carlock's No. 1 Young, C N½ NW NW Sec. 23-15-5.
Rig.

Sinclair Prairie Oil Co.'s No. 1 Hoyt, NW SW NE Sec. 5-14-3.
Wilcox sand 5,062-71 ft.; shot at 5,047-71 ft.; swbd. 105 bbls. in 22 hrs.

Slick-Urschel's No. 1 Miller, NW SE Sec. 25-15-3.
Location.

LOGAN COUNTY

Helmerich-Payne et al's No. 1 Sturgis, SE NW Sec. 1-15-2w.
Hunton 5,743 ft.; T.D. 5,910 ft.

Shell Pet. Corp. et al's No. 1 Hirzel, SE SW SW Sec. 7-16-2w.
Checkerboard lime 4,615 ft.; drlg. 4,773 ft.

Sinclair Prairie and Slick-Urschel's No. 1 Koatsch, SW cor. Sec. 23-15-3w.
Rigging up.

Sinclair Prairie Oil Co. et al's No. 1 Dunbar, Sec. 25-15-4w.
Wilcox 6,890 ft.; dry and abd.

Sinclair Prairie Oil Co. et al's No. 1 School Land, SE cor. Sec. 36-17-1w.
Simpson dense 5,255 ft., T.D.; waiting for pipe line connection.

Slick-Urschel et al's No. 1 Pennington, C SW NE Sec. 10-16-1w.
Rigging up rotary.

J. C. Schaffer et al's No. 1 Watson, C NW NE Sec. 15-15-4w.
Cellar.

McCLAIN COUNTY

C. W. James et al's No. 1 Neal, C NW SE SW Sec. 4-5-3.
Hunton 3,325-37 ft.; running 8-in. csg.

NOBLE COUNTY

Marathon Oil Co.'s No. 1 Gilbert, NE cor. Sec. 24-22-2.
Wilcox sand 4,449 ft.; T.D. 4,480 ft.; flowed 392 bbls. in 21 hrs. after shut in 47 hrs.

OKFUSKEE COUNTY

Amerada Pet. Corp.'s No. 1 Jaynes, NW NW SW Sec. 20-10-10.
Sand 2,938-53 ft.; 30,000,000 ft. of gas; killed gas; set 8-in. 2,940 ft.

Mid-Continent Pet. Corp.'s No. 1 Haney, SW SE NE Sec. 24-12-8.
Mayes 3,750 ft.; cored 3,770-86 ft.

OKLAHOMA COUNTY

Anderson & Kerr et al's No. 1 Linn, SW NW Sec. 17-14-2w.
Location.

R. Carl Larkin's No. 1 Brobine, NW NW NE Sec. 33-13-5w.
Rig and pits.

J. C. Shaffer et al's No. 1 Bullard, SW cor. Sec. 13-13-2w; (Wilcox test).
Wilcox 6,525 ft.; T.D. 6,543 ft.; dry and abd.

(Continued on Next Page)

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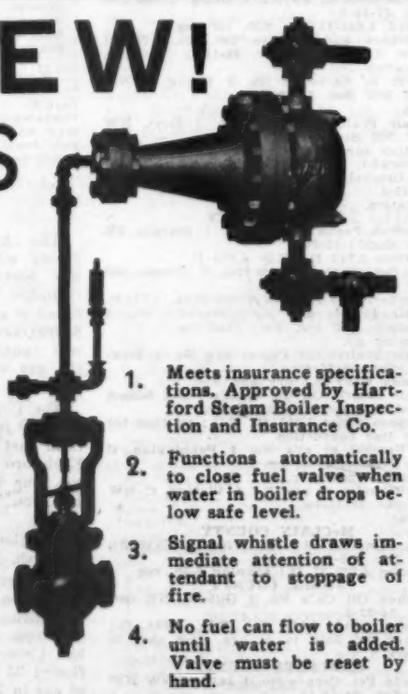

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3,238 feet, with the water at 3,276-78 feet, total depth.

Champlin Refining Co. completed No. 4 Sea, SW NE SW Section 30-7-8, Fish Pool, in Cromwell sand at 3,085-3,101 feet. It flowed 424 bbls. in 24 hours. Magnolia Petroleum Co. completed No. 4 Reed, SW SE SE Section 30-7-8, a 400-bbl. well, from sand at 3,078-3,128 feet.

Champlin Refining Co.'s No. 2 Wolf, SW NW NW Section 32-7-8, got Wilcox sand at 4,220-23 feet, and it made a 160-bbl. production on the pump on its completion test.

Champlin Refining Co. was rigging up No. 1 Sea, SE NE SW Section 30-7-8, to deepen it, and was building rig for No. 6 Sea, twin to No. 1, SE NE SW Section 30. Well and others were rigging up machine for No. 1 Davis, SE SE NW Section 30-7-8. Oils, Inc., have cellar and pits dug for No. 1 Whitney, SE NE NW Section 31-7-8. Jack Shaffer was rigging up rotary for No. 1 Sarkey, SE NE SW Section 31-7-8. Stanolind Oil & Gas Co. had cellar and pits dug for No. 2 Myers, NE NW NE Section 31-7-8.

In Pottawatomie County, Barnsdall Oil Co. had cellar and pits dug for No. 1 Hubbard, SW NW NW Section 29-8-4.

Pure Oil Co. was rigging up standard tools to deepen No. 4 Harjo, SE SW NE Section 11-7-4, present depth 4,361 feet.

Commercial Drilling Co.'s No. 1 Horick, NW SW NW Section 1-6-4, South St. Louis area, was abandoned. It was a hole full of water from Wilcox sand at 4,261-67 feet. The company abandoned the location for No. 1 Ray, NE SE NE Section 2-6-4.

Gypsy Oil Co.'s No. 3 Gray, C N half N half SW Section 25-6-4, was completed. It pumped 204 bbls. of oil and 672 bbls. of water from dolomite at 3,370 feet, total depth 3,465 feet.

Harris & Brown abandoned the location for No. 1 Hidden, SW NE NE Section 5-6-5. Amerada Petroleum Corp. was building rig for No. 1 Kodden, NW NW SW Section 13-6-5.

Gypsy Oil Co.'s No. 1 Grayson, SW SW NW Section 13-6-5, pumped 319 bbls. of oil in 19 hours from dolomite topped at 3,745 feet, total depth 3,816½ feet, first oil at 3,798 feet. It was not completed.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. made a location for No.

Wildcat Operations in Oklahoma

(Continued from Preceding Page)

Springrose Drlg. Co.'s No. 1 Edwards, C SE Sec. 19-11-1.
T.D. 6,540 ft.; P.B. to 5,500 ft.

OSAGE COUNTY

Peters Pet. Co. and Norbla Oil Co.'s No. 1, SW cor. Sec. 15-25-5.
S.D. at 3,134 ft.

PAYNE COUNTY

Marathon Oil Co.'s No. 1 Potts, C SW SW Sec. 27-19-2.
Sand 4,907 ft.; cored 4,910-14 ft.; drlg. 4,917 ft.

PITTSBURG COUNTY

McAllister Pet. Corp. et al's No. 1 Chunn, C SE NW Sec. 29-4-14.
T.D. 1,530 ft.; pipe collapsed; S.D.

P. H. Gray et al's No. 1 Lee, NW SE Sec. 12-5-12.
Drlg. 715 ft.

PONTOTOC COUNTY

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-3-6.
S.D. 2,920 ft.

Mudge O. & G. Co.'s No. 1 Clampett, SW NW NW Sec. 10-2-6.
Sylvan 140 ft.; Viola 285-379 ft., T.D.; drlg. 379 ft.

Paramount Oil Co.'s No. 1 Graham, SW SE SW Sec. 13-1-7.
Set 8-in. csg. 2,473 ft.; drlg. 2,525 ft.

Gillett & Kroeger's No. 1 Robbins, NE SE Sec. 31-1-4.
Machine.

Gillette & Kroeger's No. 1 Daver, NW SE Sec. 36-1n-6e.
T.D. 784 ft.; S.D.

H. M. Marcum's No. 1 Magnuson, SW SE SE Sec. 22-2-7.
H.F.W. 1,165-80 ft.; T.D. 1,732 ft.; lowering 6-in. csg.

J. D. Sledge and Jack Lynch's No. 1-A (twin) Thompson, SW NE SW Sec. 1-1n-7e.
Bromide at 4,502 ft.; first sand at 4,585-4,605 ft.; broken sand 4,605-26 ft.; second sand at 4,647-56 ft.; hole filled 500 ft. with wtr.; to P.B. 100 ft. and shoot.

Southern Oil Corp.'s No. 1 Ladd, C NW NW Sec. 27-3-7.
Drlg. 2,623 ft.; in Viola.

Southern Oil Co.'s No. 1 Walker, NW NW SW Sec. 11-4-6.
Sand 785-816 ft.; 8,000,000 ft. of gas; lowering 10-in. pipe to kill gas.

PUSHMATAHA COUNTY

Whitehead Drlg. Co. et al's No. 1 Messer, SE SW SW Sec. 35-2s-18e (O.W.D.D.).
8-in. 2,595 ft.; sand 2,660-80 ft.; S.D. 3,490 ft.

SEMINOLE COUNTY

Atlantic Oil Prod. Co. et al's No. 1-A Thompson (community test), SW SE SE Sec. 15-11-8.
Cromwell sand 3,550-60 ft., T.D.; no showing.

Ray Dorris and J. T. Hall's No. 1 Dorris, SE SE SW Sec. 31-10-7.
S.D. 281 ft.

Crabtree Drlg. Co.'s No. 1 Chandler, NE SE SW Sec. 4-5-6.
Spudding.

Harris and Haun's No. 1 Harjo, NE SE NW Sec. 11-8-6; (O.W.P.B.).
P.B. to 2,115 ft.; H.F.W.; S.D.

Gypsy Oil Co.'s No. 1 Grayson, SW NW Sec. 13-6-5.
Simpson dolomite 3,745-3,804 ft.; swbd. 497 bbls. in 16½ hrs.; drilled to 3,809 ft.; cored to 3,812 ft.; swbd. 416 bbls. in 16 hrs.; pumped 319 bbls. in 11 hrs.

Verser & Clay et al's No. 1 Thomas, NE SE NW Sec. 1-6-6.
S.D. at 2,802 ft.

Wofford Drlg. Co. et al's No. 1 Abbott, NE cor. Sec. 32-8-7.
Drlg. 1,910 ft.

Wofford Drlg. Co. et al's No. 1 Thomas, NW SE Sec. 8-6-7.
S.D. 1,742 ft.

TEXAS COUNTY (PANHANDLE)

Ben F. Ash et al's No. 1 Guymon Townsite, C NE SE Sec. 30-3n-14e; (Cimarron Meridian).
T.D. 2,420 ft.; fishing for drill pipe.

WASHITA COUNTY

Okla.-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 31-8-13w.
T.D. 2,430 ft.; lost tools in hole; rig rebuilt; S.D.

Anadarko Basin Oil Co.'s No. 1 Wolf, NE SW Sec. 23-9-17w.
Rigged up and S.D.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire et al's No. 1 Rowland, NW NE NE Sec. 18-3-10.
H.F.W. 3,844 ft.; test shallow sand.

Malernee et al's No 1 D. O. K. Land Co., C SE SE Sec. 16-2s-13.
S.D. 3,115 ft.

BRYAN COUNTY

C. B. Welch's No. 1 Collins, SW cor. NE NE SE Sec. 19-3s-8e.
Moving in large machine.

COMANCHE COUNTY

H. W. Baker's No. 1 Miller, SE SW SE NE Sec. 22-2-13w.
Drlg. 115 ft.

Oscar Jones' No. 1-A Sheetz, NE SW Sec. 26-3-10w.
Machine.

Henry Rosenthal et al's No. 1 Au-Chi-Re-Ah, NW cor. Sec. 5-1-9w.
Drlg. 240 ft.

F. F. Stevens' No. 1 Green, SE SW Sec. 2-1-13w.
T.D. 1,215 ft.; S.D.

Heiden & Taylor's No. 2 Crutcher, C NE Sec. 11-1n-12w.
S.D. at 860 ft.

JACKSON COUNTY

Associated Oil Co.'s No. 1 Harrell, NE SW Sec. 13-1-21w.
Spudded and S.D.

Burk Royalty Co.'s No. 1 Gore, SE NW SE Sec. 3-1s-20w.
S.D. at 1,909 ft.

Gypsy Oil Co.'s No. 1 Stokes, SE NW SW Sec. 11-1-20w.
Lime 1,709-11 ft.; T.D. 1,722 ft.; S.D.

Palo Duro Oil Co.'s No. 1 Balum, SW SW SE Sec. 16-2-21w.
Drlg. 40 ft.

Petroleum Prod. Co.'s No. 1 Cole, SW SE Sec. 34-2-20w.
Lime 1,068-75 ft., T.D.; U.R. 8¼-in. csg.

Selby Oil Co.'s No. 1 Holt, SE SW Sec. 15-2-20w.
Drlg. 635 ft.

D. Scheig's No. 1 James, NE cor. Sec. 23-1-20w.
Drlg. 905 ft.

D. Scheig et al's No. 1 Cole, NE SE SE Sec. 5-1n-20w.
Machine.

Whatley & Whatley's No. 1 Holt, NW SW SE Sec. 26-1n-20w.
Drlg. 620 ft.

JOHNSTON COUNTY

W. A. Delaney et al's No. 1 Diamond, NW NE SE Sec. 5-1s-8.
Drlg. 2,100 ft.

MARSHALL COUNTY

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
Drlg. 5,004 ft.

McCURTAIN COUNTY

J. V. Scrivener et al's No. 1, NE SW SW Sec. 24-6s-21.
Machine.

MURRAY COUNTY

Equitable O. & G. Co.'s No. 1 Scott, CSL N½ NW SW Sec. 15-1s-3.
Sand 427-42 ft.; lowering 10-in. csg.

Manahan et al's No. 1 Ward, NE SE NW Sec. 18-1s-3; (Wilcox sand test).
Spudded.

C. P. Williams et al's No. 1 Singleterry, SE SW NW Sec. 25-2s-3e.
T.D. 743 ft.; S.D.

STEPHENS COUNTY

J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w.
Rig down, drill pipe in hole; T.D. 3,220 ft.

3 Palmer, NE NW NW Section 36-6-7, Sasakwa townsite.

Grady County

Oklahoma Gas Utilities Co. have rig up for No. 18 Farwell, a twin to No. 15, 480 feet from south and 1,000 feet from east lines of NE Section 26-5-8w, Grady County. No. 15 Farwell, SW SE NE Section 26, was abandoned at 3,293 feet after penetrating a sand series at 2,916-3,293 feet.

Beckham County

E. M. Cluck has rig up for No. 1 M. C. Riley, NW cor. Section 36-9-25w, Beckham County.

Caddo County

Oscar Jones has machine in for a wildcat test west of Cement in Caddo County, No. 1-A Sheets, NE NW NE NE SW Section 26-3-10w.

Pontotoc County

In northeastern Pontotoc County, Boettcher Oil & Gas Co. was rigging up standard tools to deepen No. 2 Alexander, SW SW NE SW Section 24-4-7.

Southern Oil Corp.'s No. 1 Ladd, C NE NW Section 27-3-7, had Bromide lime at 2,140 feet; first Bromide sand at 2,243 feet from which flowed 60 bbls. of sulphur water in one hour; second Bromide sand at 2,301-25 feet and was drilling at 2,353 feet in lime. This test is about 6 or 7 miles north of the Fitts Pool.

About 24 miles northwest of the nearest production in the Fitts Pool, Mudge Oil & Gas Co. started a shallow test on the Clampett farm, SW NW NW Section 10-26-6, and found Sylvan shale at 140 feet; Viola lime at 285 feet and was drilling in Viola at 379 feet. In Section 25, in the same township, the top of the Viola is found from 3,700 feet to below 4,000 feet.

Fitts Completions

In the Fitts Pool, Carter Oil Co. completed No. 2 Craddock, SE SE NE Section 25-2-6. It flowed 1,370 bbls. in 90 minutes. Bromide was topped at 4,230 feet and McLish at 4,290 feet, total depth 4,305 feet. No. 3 on this lease made 1,043 bbls. of oil the first 55 minutes and No. 4 made 1,063 bbls. the first 55 minutes. They were completed before No. 2.

Magnolia Petroleum Co. completed No. 5 Tom Norris, NW NW SE Section 25-2-6. It had Bromide at 4,102 feet, total depth 4,305 feet, and flowed 770 bbls. through casing the first hour. It produced gas at the rate of 3,000,000 feet per day.

Stanolind Oil & Gas Co.'s No. 3 Norris Royalty Co., NE SW SE Section 25-2-6, flowed 45 to 60 bbls. per hour from Viola lime topped at 3,755 feet and was drilling at 3,870 feet. Carter Oil Co.'s No. 4 Richards, NW NE SE Section 30-2-7, flowed 901 bbls. of oil in two hours together with gas at the rate of 5,500,000 feet per day from McLish at 4,190-4,205 feet.

Stanolind Oil & Gas Co. and others completed No. 2 Hardin, NW NW SW Section 30-2-7. It had Bromide at 4,065 feet; sands at 4,175 and at 4,240 feet and McLish at 4,286-94 feet. It flowed 1,170 bbls. in two hours through casing and yielded gas at the rate of 4,000,000 feet.

Same operators' No. 3 Hardin, SW cor. Section 30-2-7, flowed 608 bbls. in 1 hour and 20 minutes and then 284 bbls. in two hours. Bromide was topped at 4,005 feet with sands at 4,115 feet and at 4,171 feet; McLish at 4,228-36 feet.

New work included Phillips Petroleum Co.'s No. 5 T. Norris, NW SE SW Section 25-2-6, and No. 6 T. Norris, SW NE SW Section 25-2-6, both locations; Carter Oil Co.'s No. 6 D. Hardin, NW SE SW Section 30-2-7, and No. 7 D. Hardin, SW SE SW Section 30-2-7, both locations; Deep Rock Oil Co.'s No. 4 Hardin, NW SE NE Section 30-2-7, location.

The Sledge & Lynch test in SW NE SW Section 1-1-7, found Bromide at 4,503 feet; first sand at 4,585-4,605 feet; broken sand at 4,605-36 feet, and second sand at 4,647-56 feet. The hole filled 500 feet with water. Arrangements were being made to plug back 100 feet and shoot the formation.

Sunray Oil Co. and Mid Texas Oil Co. were building rig for No. 1 Curtis, SW SE NW Section 13-1-7, a half mile north of the Paramount Oil Co.'s test in SW SE SW Section 13-1-7, which was drilling at 2,538 feet and about 2 miles or less south of the Lynch and Sledge well.

Carter County

In the old Healdton Pool in Carter County, Schermerhorn Oil Co. completed No. 33 fee, 480 feet from south and 927 feet from west lines of NW Section 5-4s-3w. It made a 75-bbl. well after a shot at 1,017-42 feet. The same operator was rigging up rotary to deepen No. 32 fee, 520 feet from north and 390 feet from west lines of SW Section 5-4s-3w, old total depth 1,533 feet. In the same pool, Coline Oil Co. completed No. 10 Willis, SE cor. NE Section 6-4s-3w, an old well deepened to sand at 1,190-1,220 feet. It made a 25-bbl. pumper after a shot.

Skelly Oil Co. brought in another producing well on the edge of the Fox Pool, No. 4 Wesley Moore, NE SW NW Section 17-2s-2w, in a sand series at 1,440-2,580 feet. It flowed over 300 bbls. and then quit and preparations were being made to swab it.

Chamberlain and others' No. 1 Daugherty, SW SE SW Section 17-4s-2w, was swabbing 2 bbls. of oil per hour from sand at 1,449-59 feet.

Stephens County

Bishop Oil Co. had rig up for No. 1-B Parker, 165 feet from north and east line of SE Section 11-2s-8w, Stephens County.

New Spacing Regulation Proposed in Oklahoma

OKLAHOMA CITY, Okla., Feb. 2.—Regulation of spacing of wells in oil fields of Oklahoma is provided in a bill amending the present proration law, introduced in the house of representatives by Aubrey Kerr and V. L. Kiker.

This bill is said to have the approval of many oil producers and the corporation commission's proration department. It amends Sections 2, 3, 4 and 6 of Chapter 131 of the session laws of 1933, which originally was known as House Bill No. 481.

Section 3 of the Kerr-Kiker bill amends Section 4 of the old bill and provides that the corporation commission be granted power "to establish well spacing or drilling units in any source of supply . . . where the correlative rights of the producers of oil and royalty owners therein are such that their rights will not be unreasonably prejudiced or impaired by the well spacing . . ."

Well Spacing and Units

In establishing a well spacing or drilling unit, the acreage, shape and form of such unit shall be determined upon the basis of evidence presented to the commission and include (1) the depth of the wells as may already have been completed; (2) thickness, porosity and permeability of the producing sand; (3) nature and characteristics of the reservoir energy; (4) formations encountered in any well then drilling; (5) cores taken from sands; (6) the history and producing characteristics of well in other sources of supply producing from the same formation, and (7) any other available geological and scientific data pertaining to the source of supply.

The bill provides that where an operator drills more than one well to the unit, the production from all wells shall be based on the amount allowed to one well on the unit. If several leases are combined to form the drilling unit, either operator may drill the well, but the production will be divided on a pro rata basis.

In case of leases or units on the edges of a field where a producer desires to drill closer to property lines than fixed by the commission, such permit may be granted after a hearing.

Defines Waste

In regard to taking of potentials, the Kerr-Kiker bill provides that "any method established by said commission to determine the capacity of each well to produce . . . shall be of such character as to prevent any and all of the various types of waste . . ."

In amending the section of definition of waste of oil, the authors adopted such wordage as applies in Section 2 of the original bill, adding "the use of reservoir energy for oil producing purposes by means or methods that interfere, or tend to interfere, with obtaining from the common source of supply the largest ultimate recovery of oil . . ."

Definition of gas waste in Section 3 of the original bill is carried through with the addition of the clause, "in such quantities or in such manner as unreasonably to reduce reservoir pressures and diminish, or tend to diminish, the quantity of oil that ultimately might be recovered . . ."

FIRST NOBDA CONVENTION

The first national convention of the National Oil Burner Dealers Association will be held at Pennsylvania Hotel in New York City on April 2 and 3, 1935. This meeting will be of primary interest to manufacturers, dealers and salesmen of oil burning equipment.

ASSEMBLE BLOCK IN MISSISSIPPI

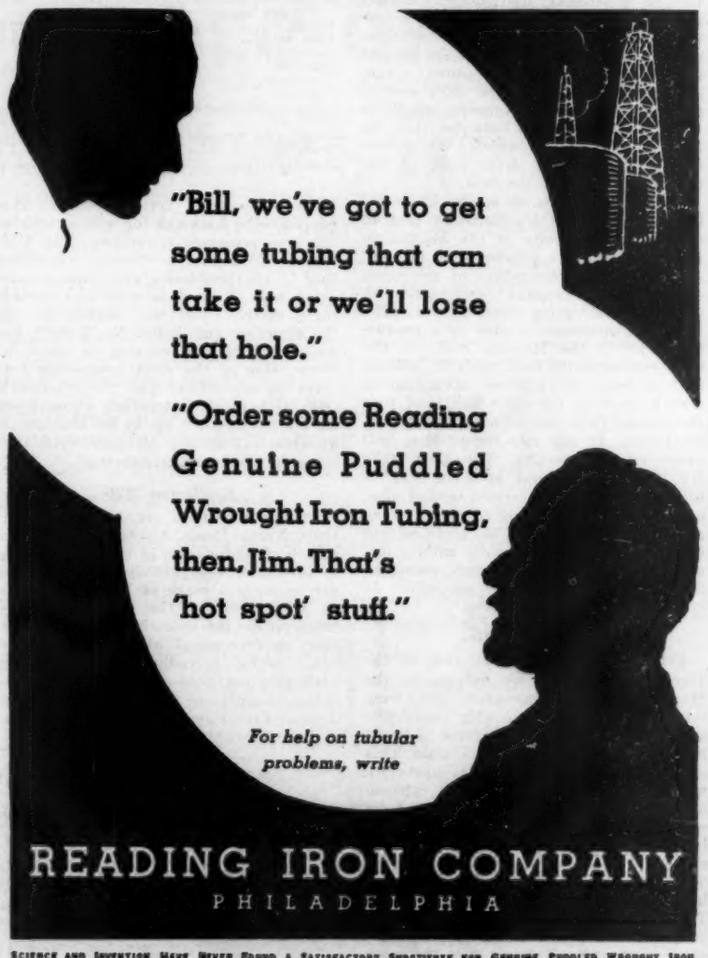
P. R. Kohlheim and others of Memphis, Tenn., have blocked approximately 10,000 acres of Form 88 leases in the eastern part of Grenada County, Mississippi, adjoining a large block held by Thompson-Westbrook Holding Co., beginning at Bogue Creek and running northeasterly and southwesterly. It is reported drilling arrangements will be made for a 3,500-foot test to the Ripley, Eutaw, Tuscaloosa and lower part of the Wilcox formations.

MONTANA CRUDE PURCHASES

COUTTS, Alberta, Feb. 2.—Notice was recently given by the Montana Pipe Line Co., buying oil for the Imperial Oil Refineries, Ltd., at this point, to Cut Bank producers without contracts that, effective February 1, deliveries would be cut 40 per cent on the basis of December runs. It is understood this measure is merely temporary, and normal buying will be resumed about March 15.

H. L. FOSTER DEAD

H. L. Foster, for a number of years tax agent of the Union Oil Co. and who was retired a few years ago, passed away at his residence in Los Angeles last week. Mr. Foster was 79 years of age.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Probable Discovery of New Productive District to the East of Montebello Field Is Indicated

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Feb. 2.—The probable discovery of a new productive area east of the Montebello Field of Los Angeles Basin may exert a substantial effect on the production situation and may possibly complicate the curtailment program if the new area comes up to expectations. The discovery well in this new section is not actually on production but a drill stem test was so positive that operators expect the completion of a well good for approximately 1,000 bbls. per day. The new oil sand was found in the Pliocene and apparently does not correlate with any productive zone in the Montebello Field. This is of prime importance because there is the further possibility that deeper drilling may prove up another horizon in the underlying Miocene. Drilling operations undertaken in this field up to the present indicate that the Miocene shows a substantial thickening in the older section of the field and an opposite condition west of the field. This indicates that the Miocene will be encountered at a substantially shallower depth east of the productive limits of the field.

The real significance of the Universal Consolidated Oil Co.'s discovery east of the productive limits of the Montebello Field cannot be appreciated at present, although everything points to the existence of an independent accumulation in the area undergoing development. The failure of operators to pick up a productive zone in the Miocene rocks in the older section of the field tends to indicate that perhaps the primary accumulation may be east of the older field and that the present field may be a secondary concentration. At any rate the problem will prove very interesting. The Universal's No. 1 Nutt, bottomed at 5,122 feet, is being reamed preparatory to setting pipe, and if nothing develops to retard work a production test will be made within the next 10 days. This well, with a formation tester set at 5,021 feet, recovered 24 stands of 35.6 gravity oil, which in any field is rather conclusive.

Leasing Activities

Following discovery of oil sand in the Universal Consolidated's outpost in the Montebello Field, operators got busy tying up every bit of possibly productive acreage, with the result there is very little available at the present time. This aggressive work indicates that operators will begin drilling over a large expanse of territory as soon as the Universal develops production. This is especially true in view of the shallow depth at which the Universal got the probable pay as a 5,000-foot hole in this field can be drilled in about six weeks at a minimum of cost. The area east of Montebello looks good at present and will bear watching, because every indication points to the completion of an excellent producer. Over $750,000 has been expended in a vain effort to develop deep production in the older section of the field since the attention of operators was focussed on this area by the Universal more than a year ago.

Universal Consolidated Oil Co.'s first test in this area was No. 1 Cruz, and while this outpost was not given much consideration it attracted some attention when it was completed flowing about 1,000 bbls. per day from 7,010 feet. Due to its location with respect to structure, operators immediately began drilling a series of tests to the west as contours of the field indicated the structural high would probably be centered somewhere in the older section of the field. One by one these supposedly better located tests proved to be duds and for several months the area remained an enigma. The Universal Consolidated finally concluded that if the productive area was not located west it must be east, and accordingly moved 1,500 feet farther out on the structure and drilled No. 2 Nutt, the well which is now causing so much interest. One of the most interesting features in connection with the company's test is the fact that it has encountered an oil zone higher up in he hole which apparently does not correlate with anything in the immediate district.

Kettleman Hills

At this time each year the Kettleman Hills North Dome Association makes a survey of its holdings in the North Dome to determine the participating and nonparticipating acreage at Kettleman Hills as production for the ensuing year is based on the pro rata share of each operator as determined at the end of the fiscal period preceding. In accordance with this practice, an engineering committee, comprising C. M. Wagner of the General Petroleum, R. M. Barnes of Continental, N. A. Rousselot of Milham Exploration Co., F. S. Hudson of Shell, L. A. Cranson of Kettleman Oil Corp., L. N. Waterfall of Union Oil Co., E. G. Gaylord of Standard Oil Co. and A. S. Hayes of Kenda, is making a minute survey to determine if any changes are necessary in the location of the blue, brown and purple lines that serve to define the productive and partially productive limits of the North Dome. The location of these various lines is of paramount importance because the pro rata interest of each operator depends upon the amount of acreage lying within the participating acreage.

The Kettleman North Dome Association appears to have defined the limits of production at one point out on the north flank within the past year by abandoning No. 55-16-Q in Section 16-22-18, but the Standard extended the participating area by completing No. 21-19-J in Section 19-21-17. Kenda's abandonment was somewhat of a surprise as the well in question was just outside of the inner or irreducible line, but the Standard's extension well was rather anticipated as it is located in the western end of the structure, which has proven to be the most productive section of the field. The Standard's No. 21-19-J was completed flowing 2,913 bbls. of clean 33.7 gravity oil and 2,100,000 feet of gas per day from 8,564 feet after the hole had been finished with a 4¾-inch liner carrying 402 feet of perforated. This new well will probably show a substantially larger initial on the projected five-day flow test as it seems to be building up in good shape. The Union's No. 8 King, finished last week, has been given a potential rating of 12,245 bbls. per day exclusive of the 24,400,000 feet of gas which is accompanying the oil. During the early part of the week the Standard recompleted No. 87-19-J flowing 6,026 bbls. of clean 33.7 gravity oil and 6,160,000 feet of gas per day.

Mountain View

Two new wells were finished in the Mountain View Field of Kern County this week and both registered substantial production. Hancock Oil Co.'s No. 3 Miller, finished at 5,348 feet, was brought in flowing 3,300 bbls. of relatively clean 28.9 gravity oil per day. The A. T. Jergins Trust completed No. 2 Wright-Bloemer at 5,716 feet, brought in flowing 2,275 bbls. of clean 29.1 gravity oil and 1,600,000 feet of gas per day after the hole had been finished with a 6⅝-inch liner including 268 feet of perforated. This field is still relatively active and may furnish additional completions during the next several weeks. Extension work in the extreme eastern end of the field has proved rather successful and two new wells will be required to offset the latest completion in that area.

In the Midway-Sunset Field of Kern County Honolulu Consolidated Oil Co. completed No. 5 in Section 12-32-24, showing an initial daily production of 631 bbls. of clean 26.1 gravity oil and 520,000 feet of gas from 3,094 feet after the hole had been finished with a 6⅝-inch liner carrying 118 feet of perforated. The Hall-Mark Oil Co. finished its No. 1 in Section 25-12-24 several days ago, but it was good for only 100 bbls. per day from 2,545 feet. This well is in close proximity to No. 1 Lakeview, the largest ever finished in this field. The Lakeview gusher, finished in 1910, blew in flowing approximately 70,000 bbls. per day but did not prove to be the bonanza expected due to losses experienced in transportation and the lack of adequate storage facilities.

Santa Barbara

Santa Barbara Mesa is still a very active field although there is tangible evidence indicating a lessening of work. During the current week Fred Cole recompleted No. 6 Mesa doing 598 bbls. of 18.1 gravity oil per day on a compressor from 2,004 feet. This well, which was recompleted with the hole open from 1,968 feet to bottom, 2,004 feet, was originally finished in December doing 296 bbls. per day from 1,970 feet but failed to hold up. Fairmesa Oil Co.'s No. 2 Gray proved good for 344 bbls. of clean 18.2 gravity oil per day on a compressor following completion at 2,025 feet with the 5¾-inch water string landed and cemented at 1,970 feet. E. C. Arnold failed to get a natural flow in his No. 1 Booker, and it was put on the beam following completion at 2,027 feet. It showed an initial of 149 bbls. of clean 18.1 gravity oil per day.

In the Rincon Field of Ventura County Chanslor-Canfield Midway Oil Co. recompleted No. 4 Hobson after redrilling

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

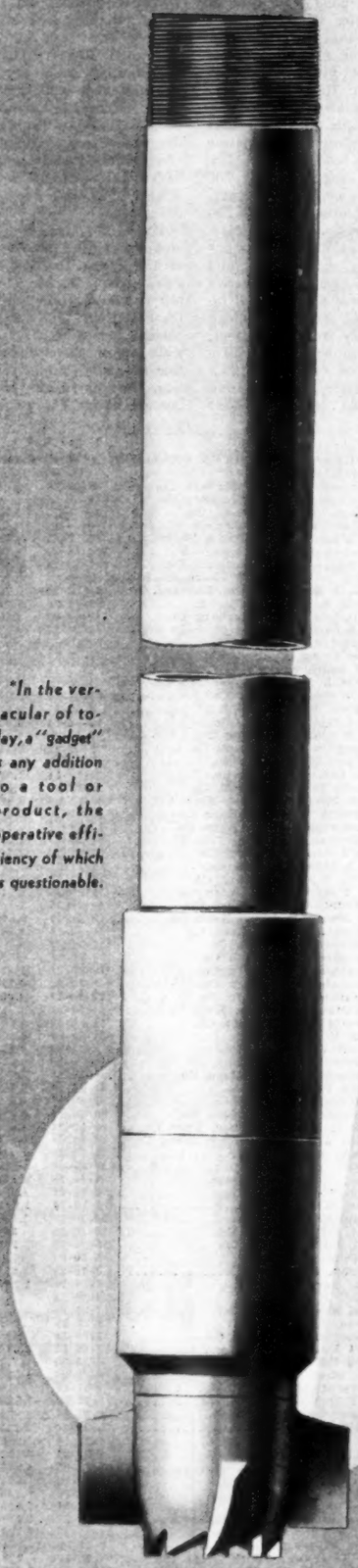
	January 20		January 13			
Intercoastal-domestic—	Total this week	Daily average	Total this week	Daily average	This year to date	Same time last year
Fuel oil	.....	.....	.....	.....	.....	764,245
Diesel and gas oil	158,924	22,703	.....	.....	158,924	74,071
Gasoline	.....	.....	228,841	32,692	297,949	154,215
Kerosene	78,460	11,209	.....	.....	78,460	.....
Foreign exports—						
Crude oil	143,018	20,431	283,413	40,488	484,592	392,600
Fuel oil	210,494	30,071	353,377	50,482	586,945	572,152
Diesel and gas oil	2,590	370	85,516	12,217	93,556	185,908
Gasoline	2,461	352	64,890	9,270	67,351	426,031
Kerosene	2,475	354	31,346	4,478	33,821	61,584
Coastwise-domestic—						
Crude oil	78,542	11,220	303,074	43,296	520,512	87,478
Fuel oil	386,003	55,143	204,693	29,242	968,806	605,511
Diesel and gas oil	13,101	1,872	3,531	504	16,632	24,539
Gasoline	178,555	25,508	121,607	13,372	620,990	884,323
Kerosene	.....	.....	1,919	274	13,307	.....

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Diesel and gas oil	.....	.....	78,075	11,154	78,075	97,993
Foreign exports—						
Crude oil	76,974	10,996	.....	.....	76,974	76,255
Fuel oil	20,133	2,876	53,891	7,699	74,024	79,351
Diesel and gas oil	.....	.....	2,684	383	3,858	106,008
Gasoline	.....	.....	99,569	14,224	162,099	78,042
Kerosene	.....	.....	1,330	190	3,383	10,960
Lubricants	.....	.....	.....	.....	.....	14,464
Coastwise-domestic—						
Fuel oil	10,708	1,530	136,694	19,528	190,884	165,664
Diesel and gas oil	.....	.....	.....	.....	10,490	25,599
Gasoline	53,071	7,582	42,366	6,052	95,437	203,104
Kerosene	.....	.....	.....	.....	.....	7,317

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.	T.	R.	Depth	Status—
Speik, F. A., No. 1 Athens, Los Angeles Co.	2-	3-	14	4,072	sd. sh. drlg.
Lennox Oil Fields Co., No. 1 Hawthorne, Los Angeles Co.	4-	3-	14	....	material
Ackerman, J. M., No. 1 Athens, Los Angeles Co.	18-	3-	14	....	rig, suspended
Macrato, A. N., No. 1 Athens, Los Angeles Co.	18-	3-	14	6,040	cmtd. 6,215
Hillside Oil Co., No. 1 Hermosa, Los Angeles Co.	31-	3-	14	....	grade
Wilshire Oil Co., No. 2 Potrero Deep, Los Angeles Co.	27-	2-	14	8,130	sd. sh. drlg.
Ohio Oil Co., No. 16 Del Rey, Los Angeles Co.	28-	2-	15	....	location
Trinity Oil Co., No. 1 Dey Rey, Los Angeles Co.	27-	2-	15	2,915	sd. sh. drlg.
Madison Oil Co., No. 1 Del Rey, Los Angeles Co.	27-	2-	15	....	rig, litigation
Mammoth Oil Co., No. 1 Del Rey, Los Angeles Co.	27-	2-	15	3,281	sd. sh. drlg.
Fourl, C. W., No. 2 Del Rey, Los Angeles Co.	27-	2-	15	4,963	sd. sh. drlg.
Dunlap, D. D., No. 1 D.D., No. 1 Dey Rey, Los Angeles Co.	27-	2-	15	5,515	sd. sh. drlg.
Shirm & Thayer, No. 1 Del Rey, Los Angeles Co.	27-	2-	15	....	bldg. rig
Union Oil Co., No. 6 Del Rey, Los Angeles Co.	27-	2-	15	6,152	flow, 820 b.d.
Union Oil Co., No. 7 Del Rey, Los Angeles Co.	27-	2-	15	1,946	sd. sh. drlg.
Big Ben Oil Co., No. 1 Del Rey, Los Angeles Co.	27-	2-	15	6,082	cmtd. 6,043
Bethlehem Expl. Co., No. 1 Manhattan, Los Angeles Co.	30-	3-	14	5,304	cleaning out
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24-	3-	15	7,315	dry, abd.
Vanco Dev. Co., No. 1 Artesia, Los Angeles Co.	25-	3-	12	....	rigging up
Universal Consd., No. 4 Montebello Deep, Los Angeles Co.	6-	2-	11	5,122	looks good
Shively, N. O., No. 1 Puente Hills, Los Angeles Co.	23-	2-	10	3,040	sd. sh. drlg.
Pressel & Tull, No. 1 Puente Hills, Los Angeles Co.	30-	2-	9	4,196	hd. sd. drlg.
International Dev. Co., No. 1 Saugus, Los Angeles Co.	34-	5-	16	4,335	cleaning out
Barstow Oil Co., No. 1 Castaic, Los Angeles Co.	35-	5-	16	3,265	suspended
Republic Pet. Co., No. 1 Newhall, Los Angeles Co.	6-	3-	15	1,591	sd. sh. drlg.
Black Eagle Oil Co., No. 1 Huntington, Orange Co.	tideland			4,702	cmtd. 4,243
Explorers Drilling Co., No. 1 Fairview, Orange Co.	9-	6-	10	945	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29-	6-	10	6,485	suspended
B. & H. Oil Co., No. 1 Newport, Orange Co.	19-	6-	10	4,296	sd. sh. drlg.
C. G. Shannon, No. 1 Yorba, Orange Co.	21-	3-	9	5,777	rigged up
Great American Pet. Co., No. 2 East Coyote, Orange Co.	19-	3-	9	3,155	cmtd. 3,152
Tehama Pet., No. 1 Santa Ana Canyon, San Bernardino.	33-	2-	8	2,698	P.B. 2,381
San Diego Pet. Co., No. 1 Chula Vista, San Diego Co.	32-18-		2	6,333	cleaning out
Stephens, J. T., No. 1 Chula Vista, San Diego Co.	27-18-		2	209	hd. sd. drlg.
Edmonds, E. A., No. 1 Trustee, San Diego Co.	29-18-		2	2,431	hd. sd. drlg.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36-	5-	5	900	hd. sd. drlg.
Corona Oil Co., No. 1 Corona, Riverside Co.	27-	3-	7	....	rigging up



Gadgets vs. Safety in a core drill

In the selection of a core drill do you give sufficient consideration to the factor of safety? Recently there has been a marked tendency toward the introduction of "gadgets"* in mechanical devices... gadgets which may or may not add to the value of the tool. When such a gadget in a core drill tends to weaken it, or sacrifice safety in any degree, it ceases to be a harmless addition thereto and immediately becomes a definite menace to the safety of the entire drilling procedure.

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*In the vernacular of today, a "gadget" is any addition to a tool or product, the operative efficiency of which is questionable.

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and deepening the hole to 4,392 feet from which depth it was returned to production doing 338 bbls. of 25.1 gravity oil per day on a compressor. This well is still showing a rather high water cut and may require further work. The Property Service Corp. has not yet completed its outpost in the extreme eastern end of the Ventura Avenue Field, but the outlook is considered rather promising. Associated Oil Co. is doing the actual drilling on this test and has encountered more than the usual amount of trouble. First the well blew out unexpectedly and caught fire and then mechanical trouble developed after drilling was resumed. It has shown enough oil sand to justify the expectation of commercial production.

Long Beach

There were several good wells put on production in the Long Beach Field of Los Angeles Basin this week, and a check indicates another group of potential producers will be given production tests within the next 10 days. Rotary Drillers Oil Co. completed No. 1 Henshaw flowing 1,198 bbls. of clean 29.1 gravity oil per day following completion at 4,413 feet after the hole had been finished with a 4¾-inch liner carrying 190 feet of perforated. This well is at Twenty-first Street and St. Louis Avenue. The Geneva-Marie Oil Co.'s No. 1 Signal blew out while the crew was drilling out the cement during a water shut-off test and the flow, since it was clean, was turned into the tanks. This new well showed an initial of 899 bbls. of relatively clean 27.9 gravity oil per day from 4,218 feet.

Olmstead Oil Co. completed No. 2 McKenzie doing 72 bbls. of very clean 26.9 gravity oil per day after the hole had been finished at 4,231 feet. Hill-Mar Drilling Co.'s No. 2 Signal was a somewhat smaller well upon completion at 5,095 feet, as it was good for only 297 bbls. of 27.4 gravity oil per day on the beam. Bremmor Petroleum Corp. completed No. 1 Roberts, but this well failed to come up to expectations as it was finished pumping 102 bbls. of 26.1 gravity oil per day from 4,047 feet. The output of No. 1 Roberts showed a cut of approximately 21.5 per cent and consequently the well may require further work. General Petroleum Corp. recompleted No. 7 Boyle-Perry after plugging back the hole from 3,048 feet to 2,810 feet and recompleted it pumping 164 bbls. of 24.5 gravity oil cutting about 40 per cent.

Playa Del Rey

Union Oil Co.'s No. 6 Vidor, a recent completion in the extreme eastern end of the Playa Del Rey Field of Los Angeles Basin, has built up to 1,256 bbls. per day and while not as good a well as Charles Fourl's No. 1 Palisades is nevertheless a satisfactory producer. Fourl's well, up on the Palisades, showed a potential daily production on a five-day flow test of 5,240 bbls. but has been beaned back. The extreme variation be-

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Company, well and location—	S.	T.	R.	Depth	Status—
General Pet. Co., No. 12 Capitan, Santa Barbara Co.	32-	5-	30	2,580	pump water
General Pet. Co., No. 13 Capitan, Santa Barbara Co.	32-	5-	30	....	bldg. rig
Shell Oil Co., No. 2 Capitan, Santa Barbara Co.	32-	5-	30	3,199	wet
Shell Oil Co., No. 4 Capitan, Santa Barbara Co.	5-	4-	30	....	bldg. rig
Royalty Serv. Corp., No. 1 Los Alamos, Santa Barbara Co.	25-	9-	32	4,500	suspended
York-Smullin, No. 2 Lompoc, Santa Barbara Co.	33-	8-	34	2,496	sd. sh. drlg.
Advance Pet. Co., No. 1 Naples, Santa Barbara Co.	7-	4-	29	6,532	rd. sh. drlg.
Barnsdall-Rio Grande, No. 10-28 Elwood, Santa Barbara.	tideland			....	rigged up
East Elwood Pet. Co., No. 1 Elwood, Santa Barbara Co.	14-	4-	29	3,732	cmtd. 3,677
Shell Oil Co., No. 1 Goleta, Santa Barbara Co.	20-	4-	28	6,295	rd. sd. drlg.
Standard Oil Co., No. 2 Goleta, Santa Barbara Co.	17-	4-	28	4,850	will cmt.
Ortega Oil Co., No. 1 Summerland, Santa Barbara Co.	16-	4-	26	4,583	repair mach.
General Pet. Co., No. 4 Rincon, Ventura Co.	tideland			....	bldg. found.
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22-	3-	20	7,370	cmtd. 7,000
El Rancho Oil Co., No. 1 South Mountain, Ventura Co.	9-	3-	19	....	rigging up
The Texas Co., No. 128 South Mountain, Ventura Co.	4-	3-	19	5,430	cleaning out
Bolsa Chica Oil Co., No. 2 Piru, Ventura Co.	4-	4-	18	671	cleaning out
Dawson Oil Co., No. 1 Simi, Ventura Co.	5-	2-	17	1,876	suspended
Continental Oil Co., No. 1 Ojai, Ventura Co.	13-	4-	23	1,643	run. tbg.
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	34-	3-	23	7,110	swabbing
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	32-	4-	21	2,300	suspended
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-	26-	20	1,000	sd. sh. drlg.
General Pet., No. 1 South Belridge, Kern Co.	30-	28-	21	11,377	will deepen
Union Oil Co., No. 18 North Belridge, Kern Co.	36-	27-	20	8,523	fish. D.P.
Standard Oil Co., No. 1-A North Belridge, Kern Co.	36-	27-	20	6,891	sd. sh. drlg.
Standard Oil Co., No. 2 North Belridge, Kern Co.	36-	27-	20	5,671	cleaning out
Amerada Pet., No. 2 Blackwells Corner, Kern Co.	17-	26-	19	....	bldg. rig
Standard Oil Co., No. 1 Delano, Kern Co.	1-	25-	23	2,091	sd. sh. drlg.
Trico Oil & Gas Co., No. 1 Alpaugh, Kern Co.	3-	25-	23	3,525	gas, shut in
Trico Oil & Gas Co., No. 2 Alpaugh, Kern Co.	36-	24-	22	788	cleaning out
Buckeye Union Oil Co., No. 2 McVan, Kern Co.	10-	27-	27	1,351	P.B. 1,295
Golden Bear Oil Co., No. 1 Kern Front, Kern Co.	32-	27-	27	....	bldg. rig
Hancock Oil Co., No. 4 Mountain View, Kern Co.	14-	30-	28	1,140	sd. sh. drlg.
Associated Oil Co., No. 1 Mountain View, Kern Co.	3-	31-	29	5,500	sd. sh. drlg.
Star Pet. Corp., No. 1 Mountain View, Kern Co.	10-	30-	28	4,561	sd. sh. drlg.
Shell Oil Co., No. 1 Mountain View, Kern Co.	32-	30-	29	....	bldg. rig
Union Oil Co., No. 4 Mountain View, Kern Co.	15-	30-	28	5,525	redrlg. 3,401
Union Oil Co., No. 5 Mountain View, Kern Co.	15-	30-	28	5,474	suspended
Union Oil Co., No. 6 Mountain View, Kern Co.	9-	30-	28	4,760	hd. sd. drlg.
Union Oil Co., No. 7 Mountain View, Kern Co.	28-	30-	28	4,962	sd. sh. drlg.
General Petroleum, No. 3 Mountain View, Kern Co.	14-	30-	28	....	rigging up
The Texas Co., No. 4 Mountain View, Kern Co.	14-	30-	28	5,500	sd. sh. drlg.
Barnsdall, No. 3 Mountain View, Kern Co.	31-	30-	29	6,950	reaming
Hogan Pet., No. 6 Mountain View, Kern Co.	4-	31-	29	4,760	fish. D.P.
Hogan Pet., No. 7 Mountain View, Kern Co.	29-	30-	29	....	bldg. rig
Standard Oil Co., No. 5 Mountain View, Kern Co.	24-	30-	28	....	rigging up
Hoyt, Otis, No. 2 Mountain View, Kern Co.	24-	30-	28	5,755	resume work
Ohio Oil Co., No. 1 Mountain View, Kern Co.	32-	30-	29	4,994	sd. sh. drlg.
National Oil Co., No. 1 Mountain View, Kern Co.	30-	30-	29	5,693	flow. 1,395 b.d.
Mountain View Oil Co., No. 1 Mountain View, Kern Co.	23-	30-	28	4,975	sd. sh. drlg.
Gilmore-Snyder Oil Co., No. 2 Mountain View, Kern Co.	24-	30-	28	5,470	O.S. drlg.
Jergins Trust, No. 4 Edison, Kern Co.	23-	30-	29	2,488	P.B. 2,116
Jergins Trust, No. 5 Edison, Kern Co.	23-	30-	29	....	bldg. rig
Consd. Crude Oil Co., No. 1 Edison, Kern Co.	17-	30-	29	4,871	sd. sh. drlg.
Ohio Oil Co., No. 1 Edison, Kern Co.	36-	30-	29	1,080	suspended
Shell Oil Co., No. 4 Edison, Kern Co.	15-	30-	29	2,592	sd. sh. drlg.
Shell Oil Co., No. 5 Edison, Kern Co.	21-	30-	29	1,580	sd. sh. drlg.
Monterey Expl. Co., No. 6 Edison, Kern Co.	15-	30-	29	396	sd. sh. drlg.
Monterey Expl. Co., No. 7 Edison, Kern Co.	15-	30-	29	3,252	schist
Chaulk Oil Co., No. 1 Edison, Kern Co.	5-	30-	29	....	bldg. rig
The Texas Co., No. 1 Edison, Kern Co.	4-	30-	29	3,513	P.B. 3,517
Foster, Inc., No. 1 Edison, Kern Co.	8-	30-	29	2,690	O.S. drlg.
General Pet., No. 3 Edison, Kern Co.	24-	30-	29	....	rigging up
General Pet., No. 4 Edison, Kern Co.	14-	30-	29	....	bldg. rig
Surety Oil Co., No. 1 Edison, Kern Co.	32-	29-	29	....	rig. suspended
Petroleum Drilling Co., No. 1 Edison, Kern Co.	22-	29-	29	590	suspended
Signal Oil & Gas Co., No. 1 Edison, Kern Co.	31-	29-	30	1,870	cleaning out
Signal Oil & Gas Co., No. 2 Edison, Kern Co.	5-	30-	30	....	bldg. rig
Caravel Pet., No. 1 Sivert, Kern Co.	19-	30-	30	1,590	pump water
Sea Cliff Oil Co., No. 1 Greenfield, Kern Co.	7-	31-	28	615	suspended
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	23-	32-	29	1,582	reaming
Standard Oil Co., No. 1 Semi-Tropic, Kern Co.	8-	27-	23	2,871	sd. sh. drlg.
Seepie, J. O., No. 1 Elk Hills, Kern Co.	5-	30-	24	2,281	bl. sh. drlg.
Richfield Oil Co., No. 2 Devil's Den, Kern Co.	14-	26-	18	1,200	sd. sh. drlg.
The Texas Co., No. 1 Temblor, Kern Co.	29-	29-	21	3,252	br. sh. drlg.
Shell Oil Co., No. 1 Buena Vista, Kern Co.	9-	32-	25	4,070	sd. sh. drlg.
Reserve Oil & Gas Co., No. 1 Tejon, Kern Co.	2-	10-	19	1,891	sd. sh. drlg.
Badger Oil Co., No. 1 Tejon, Kern Co.	31-	11-	19	6,248	redrlg. 4,248
Russ Oil Synd., No. 1 Dos Palos, Fresno Co.	28-	12-	11	5,015	form. test
Bergman, Harry, No. 1 Dos Palos, Fresno Co.	12-	12-	11	6,138	suspended
Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co.	24-	21-	16	10,944	suspended
K.N.D.A., No. 56 Kettleman, Kings Co.	8-	22-	15	10,154	redrlg. 9,366
Continental Oil Co., No. 1 Kettleman-South, Kern Co.	7-	25-	20	720	sh. sd. drlg.
The Texas Co., No. 1 Coalinga, Fresno Co.	35-	20-	14	1,665	br. sh. drlg.
Farrel Pet., well No. 1, San Luis Obispo Co.	18-	31-	12	1,432	hd. sh. drlg.
Willett Oil Co., No. 1 Cholame, San Luis Obispo Co.	10-	25-	15	3,603	wet
Commonwealth Consd. Gas Co., No. 1 Tulare Lake, Kings	21-	22-	20	2,490	gas, shut in
Commonwealth Consd. Gas Co., No. 3 Tulare Lake, Kings	21-	22-	20	....	rig, suspended
Kettleman Pac. Oil Co., No. 1 Tulare Lake, Kings Co.	11-	23-	16	812	sd. sh. drlg.
General Pet., No. 1 Devil's Den, Kings Co.	20-	24-	18	....	rig, suspended
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	35-	16-	1	6,774	hd. sh. drlg.
Amerada Pet., No. 1 F.L.D., San Joaquin Co.	15-	2-	5	....	material
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-	10-	14	8,220	cleaning out
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-	24-	3	2,420	hd. sh. drlg.
The Texas Co., No. 1 Petrolia, Humboldt Co.	1-	3-	2	2,000	sd. sh. drlg.

tween these two wells, located about 600 feet apart, has not been accounted for as offsets in the same field should show more uniformity as far as production is concerned. It is also significant to note that these two wells also showed a substantial variation in depth and the amount of oil sand found.

In the Huntington Beach Field of Los Angeles Basin Standard Oil Co. finished an excellent producer on the Pacific Electric lease early in the week and then followed this by completing another good well on the Huntington lease a few days later. No. 25 Pacific Electric was brought in flowing 1,451 bbls. of clean 23.2 gravity oil per day from 4,350 feet after the hole had been finished with a 6⅝-inch liner including 531 feet of perforated. This well was originally completed a few weeks ago, at which time it showed a potentiality of 251 bbls. per day from 3,961 feet. Deepening the hole to 4,350 feet made considerable difference in production. The Standard's No. 71-B also proved to be a good producer as this well, finished at 4,350 feet with a 6⅝-inch liner carrying 568 feet of perforated, was brought in flowing 2,272 bbls. of clean 25.3 gravity oil per day. The Day Investment Co. has succeeded in recompleting No. 2 McCoy after redrilling the hole to 3,990 feet from which depth it was returned to production pumping 148 bbls. per day.

West Coyote

The Standard Oil Co. added a new well to its list of producers in the West Coyote Field of Los Angeles Basin when No. 118 Murphy-Coyote was brought in flowing 886 bbls. of relatively clean 23.5 gravity oil and 569,000 feet of gas per day from 6,050 feet. It was plugged back from 6,235 feet and finished with a 6⅝-inch liner including 451 feet of perforated and 5,995 feet of 2½-inch tubing. In the Dominguez Field the Union Oil Co. recompleted No. 19 Callender after deepening to the fourth Callender zone at 5,042 feet from which depth it was returned to production doing 199 bbls. of 32.6 gravity oil per day.

Operators will undertake a consistent drilling program in several Los Angeles Basin Fields during 1935. This is especially true of Santa Fe Springs where the Union Oil Co. is drilling two new wells and has locations staked for eight additional wells. General Petroleum Corp. is also making preparations to start additional wells in this field as material has just been placed on ground for Nos. 37-B and 46-B. Work is progressing at a fast pace in the Playa Del Rey Field, although operators holding town lot acreage are still held up by drilling restrictions. These will be removed within the next week or so, however, and operators will proceed with development. Tentative regulations prohibit the drilling of any well on a lease or property containing less than one full acre. This restriction was placed on the area by the Los Angeles city council to prevent town lot development. There are a number of other restrictions designed to prevent unrestricted drilling.

Canadian Fields

(Continued from Page 60)

ates a test will be made to determine whether freezing or bridging is holding back production.

Publix Oil & Gas Co.'s No. 1, LSD 8, same section, is in the belennite formation below 4,875 feet and expected to get the lime around 3,930 feet. It got good shows of gas and light crude in several upper horizons. Renfrew Royalties' No. 1 Morris & Goodfellow, LSD 3, is shut down at 4,410 feet waiting for 10-inch casing. British Dominion Oil & Development Corp.'s No. 4, LSD 6, is through the red beds below 4,600 feet.

In the far south Union-Freehold Oil Corp.'s No. 1, LSD 8, Section 21-18-2w5, is below 5,050 feet and nearing the Home sand. This, the farthest south test now active, and approximately a half mile south of the nearest producer, is approximately 400 feet deeper than Highwood-Sarcee's No. 1, which got the lime at 5,348 feet, indicating that Union Freehold's No. 1 may get the producing horizon around 6,000 feet.

On the east side, Merland Oil Co.'s No. 1, LSD 13, Section 27-18-2w5, is below 2,875 feet and preparing to lower 13⅜-inch casing. It got the cardium marker at 2,260 feet.

In the North Turner Valley Field, Royalite Oil Co.'s No. 26, LSD 5, Section 23-20-3w5, is below 1,734 feet.

Cardston Gas Test

On the Cardston structure, is southern Alberta, Franco Oils' No. 1, LSD 6, Section 5-3-25w4, is resuming from 1,900 feet. Several gas shows have been encountered. The drill is in the St. Mary's formation, much higher geologically than the Benton in Turner Valley, and a productive horizon is looked for around 2,200 to 2,300 feet. The company holds 10,000 acres on structure.

Tests in the Foothills

On the Highwood-Sinclair structure south of Turner Valley, Canadian Royalties' No. 1 Banner, LSD 6, Section 34-17-3w5, is resuming from 718 feet.

On the Watson structure, west of Lundbreck, operations are practically at a standstill owing to heavy winds and deep snow. Raven Oils' No. 1, LSD 1, Section 20-9-2w5, is at 1,225 feet and waiting for casing. Mar Jon Oil Co.'s No. 3, LSD 3, Section 4-10-2w5, is standing cemented at 740 feet. Mar Jon-Maxmont's No. 4, LSD 10, Section 20-9-2w5, is temporarily shut down at 1,295 feet. Mar Jon's No. 3 got the cardium marker around 730 feet, indicating the formations here are from 1,000 to 1,600 feet higher than in Turner Valley, with top of the lime around 3,700 feet.

British Columbia

In the Fraser Valley area, British Columbia, Noble Francis Syndicate's No. 1, Township 13-2wCM, is shut down at 1,200 feet after encountering some gas showings. Noble Francis' No. 2 is being spotted in the same general area, south of New Westminster.

In the Boundary Bay district, Natural Gas Development Corp.'s No. 1, Section 27-4, Delta range, 25 miles from Vancouver, is setting 12½-inch casing at 710 feet.

In the Flathead Valley, southeastern British Columbia, Columbia Oils' No. 1 is below 2,100 feet.

Ontario Drilling

In the De Clute Field, Kent County, Ontario, Union Gas Co.'s No. 27, W half Lot 140, Talbot Road, Raleigh Township, is below 500 feet. It offsets Gas Producers Syndicate's No. 2, Pardo lease, about 500 feet to the northwest. Gas Producers' Syndicate's No. 3, Pardo farm, south of No. 2, is rigging.

In the Tilbury Field, Kent County, R. L. Pattinson's No. 1, Jones farm, N Lot 169, Talbot Road, Tilbury East Township, has cleaned out after a shot which increased gas production considerably. The outfit will be moved to the Guy Mifflin farm, Lot 7, Concession 14, Tilbury East Township, to drill Ladd & Ziegen's No. 2, some 700 feet east of No. 1 producer.

In the Dover Field, Kent County, Medina Natural Gas Co.'s No. 1, Stirling lease, E half Lot 1, Concession 4, Dover East Township, got the Trenton limestone at 2,920 feet, a low point, and is running 6-inch casing. Prairie Oil & Gas Co.'s No. 3 is being spotted several hundred feet north of No. 2, Front Concession, Dover East Township. Ajax Oil & Gas Co.'s No. 10, Johnston farm, 1,200 feet north of No. 9 producer, is starting work.

In the Eden Field, E. P. Rowe's No. 2, Wilson farm, Lot 27, Concession 8, Bayham Township, Elgin County, is below 775 feet. E. P. Rowe's No. 3 Coyle farm, Bayham Township, is below 600 feet. Farther east, Midwal Oil & Gas Co.'s No. 1, Lot 2, Concession 3, North Talbot Road, Middleton Township, Norfolk County, is below 685 feet. Middleton-Borfolk Gas Co.'s No. 2, Vernon McDonald Farm, Lot 5, Concession 3, North Talbot Road, same township, is spudding.

In the Petrolia Field, Lambton County, Miller & Nesbit are rebuilding the pumping outfit destroyed by fire. Two rigs will likely be erected to handle the load. The original rig was built about 1903 by the Canada Crude Oil Producers, Ltd.

PETROLEUM CHEMISTS

The petroleum group, Oklahoma Section, of the American Chemical Society, will meet at 2:30 p.m., February 9, at Bartlesville, to discuss asphalts and allied substances. The program includes the following papers: An Outlined Discussion on Asphaltites, Asphaltic Pyrobitumens and Non-Asphaltic Pyrobitumens, by R. L. Ginter, Ginter Chemical Laboratory, Tulsa; Processing Asphalt at Allen, Okla., by J. B. Fairfield, Sunray Oil Co., and Bituminous Emulsions and Their Uses, by E. W. Mace, L. R. MacKenzie, Inc., Tulsa.

HOUSTON OIL SHOW

A joint resolution has been introduced in Congress by Representative Joe H. Eagle of Texas, authorizing President Roosevelt to invite the states of the Union and foreign countries to participate in the Oil Equipment and Engineering Exposition at Houston, Tex., to be held April 8 to 13, 1935, inclusive.

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Two Near Completions Extend the Hobbs Pool; Lamar Test May be Carried to the Ordovician

By L. P. STOCKMAN
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Feb. 4.—Three wells are near completion in the Hobbs Pool in New Mexico, one of which will extend the proven area one-fourth of a mile to the northwest and another proves up one additional unit on the east. The Amerada-Skelly test on the northwest flank is estimated at 2,000 bbls. a day. The two gassers in the Cooper Pool, which were blowing wild last week, have been brought under control. The Stanolind Oil & Gas Co.'s No. 4 Meyers showed an increase in water upon drilling 8 feet deeper. One new location was staked in the Cooper area. The Amerada Petroleum Corp.'s No. 1-D State, a wildcat 7 miles north of the Eunice Pool, continues to attract attention with another gas show and a slight show of oil. Continental Oil Co.'s No. 12-A Wells-2, most northerly well in the Jal Pool, was completed for 240 bbls. of oil and 2,700,000 feet of gas the first day. One new location was made in the Jal Pool. Tignor, Etz & Keyes' No. 1 State, in the North Artesia district, in Eddy County, is a new operation getting under way.

There were no completions in Colorado. One new operation began spudding in Boulder County west of the old Boulder Field. The Trojan test at Lamar may be carried to the Ordovician.

Wyoming had one new location in the Poison Spider district in Natrona County. There were no completions.

Montana operations are confined to the Cut Bank Field where a number of wells are resuming after being shut down on account of a blizzard. Town lot drilling in Cut Bank is getting under way with six active operations.

NEW MEXICO

Hobbs Area—Lea County

Three near-completions, two of which mark slight extensions of the field, were reported in the Hobbs Pool. Amerada Petroleum Corp.'s No. 1-E State, NE SW NW Section 24-18-37, joint with Skelly Oil Co., one-fourth of a mile northwest of the Shell Petroleum Corp.'s No. 1-D State, SE cor. NW Section 24, the nearest producer on the northwestern flank, is coming in as a good well. It is flowing and is estimated at 2,000 bbls. a day from a total depth of 4,240 feet. The 7-inch was set at 4,053 feet with 300 sacks and the 3-inch tubing was run to 4,231 feet.

Another near completion is the Shell Petroleum Corp.'s No. 2 Sanger, SW SE SW Section 27-18-38. It is an outside location on the east side of the pool, a north offset to the Skelly Oil Co.'s No. 2 Turner and an east offset to Shell's No. 1 Sanger. Both of the offsets marked slight extensions of the proven area. The distance between the Amerada's No. 1-E State on the northwest and this well is 4½ miles. Shell's No. 2 Sanger was drilled to 4,228 feet and it was swabbed through the 2½-inch tubing at 4,270 feet and is estimated at 200 bbls. daily. It is testing.

A third near-completion, an inside well, is Continental Oil Co.'s No. 2 Grimes, CSL SE SE Section 28-18-38, which at 4,220 feet is flowing. It has not been gauged. The 2½-inch tubing was run to 4,060 feet.

J. P. Cusack and others' No. 1 Moon, SW cor. NE Section 28-18-38, another edge well to the north of No. 2 Grimes, set the 7-inch at 3,983 feet with 500 sacks and is drilling plug. The National Securities Oil Co.'s No. 1 Linam, NE SE SW Section 33-18-37, to the southwest of production, is sidetracking tools 8 feet off old bottom at 4,272 feet.

Cooper Area

The two wells which last week blew in unexpectedly as big gassers at the north and south extremes of the development in the Cooper Pool have both been brought under control. Humble Oil & Refining Co.'s No. 3 Cooper, C SW SE Section 14-24-36, which went wild after plugging back from 4,194 to 4,184 feet to shut off water and standing two days, was tested after running the 2½-inch tubing to 3,480 feet and was estimated at 25,000,000 feet a day through the tubing with a rock pressure of 1,150 pounds. It was then shut in for orders. Simms Oil Co.'s No. 1 Woolworth, C SE NE Section 35-24-36, which went wild at 3,406 feet for an estimated flow of 80,000,000 feet a day while fishing for drill stem, was brought under control and fishing was resumed. So far 1,700 feet of drill stem has been recovered.

Stanolind Oil & Gas Co.'s No. 4-A Meyers, C NE SW Section 22-24-36, which offsets producers on the north and east, which had sulphur water with 25,000,000 feet of gas a day at 3,600 feet, was deepened to 3,608 feet and allowed to flow into the pits for five hours. There was an increase of 12 per cent to 30 per cent in the water. A drill stem test at 3,275-3,608 feet showed 3,250 feet of water and 360 feet of oil in 12 hours. It will run tubing and packer and test above the water. Same company's No. 5-A Meyers, C NW NE Section 22-24-36, was drilled to 3,575 feet in lime and stopped to set the 7-inch at 3,527 feet with 150 sacks and is waiting.

The Continental Oil Co.'s No. 14-A Vaughn-2, C SE SW Section 14-24-36, cemented the 7⅝-inch at 1,690 feet and is drilling at 1,855 feet. Its No. 14-A Vaughn-1, C SW SW Section 14-24-36, cemented the 7⅝-inch at 1,682 feet and is drilling ahead at 2,400 feet in salt. Same company's No. 15-A Vaughn-1, C SE SE Section 15-24-36, cemented the 7⅝-inch on bottom at 1,687 feet with 500 sacks and is waiting, and its No. 15-A Vaughn-2, C SW SE Section 15-24-36, is drilling at 1,087 feet in anhydrite.

North Canadian River crossing of Cities Service Gas Co.'s 6-inch aircowelded line South of Okemah, Okla.

The Amerada Petroleum Corp.'s No. 2 Everett, C SE SW Section 26-24-36, is rigged and ready to spud. Phillips Petroleum Co.'s No. 11 Woolworth, C SE NW Sectoin 26-24-36, stopped at 1,380 feet, in salt, to cement the 9⅝-inch at 1,338 feet with 350 sacks and is waiting, and its No. 12 Woolworth, C NE SW Section 26-24-36, lost the hole at 950 feet, in the red beds, when the casing parted, and will skid the rig 24 feet to the north and start new hole. Humble Oil & Refining Co.'s No. 2 Coats, CWL NW NE Section 10-24-36, which will be drilled as a relief well for No. 1 Coats, has rig up.

The Texas Co.'s No. 2 Ogg, C NW NE Section 35-24-36, which last week showed for 23 bbls. of oil an hour on a drill stem test at 3,467-72 feet, was treated with 2,000 gallons of acid and is testing. Its No. 3 Ogg, C SW NW Section 35-24-36, is preparing to drill deeper from 3,448 feet. A drill stem test at 3,424-48 feet, showed 800,000 feet of gas in half an hour. Same company's No. 4 Ogg, C NW NW Section 35-24-36, is drilling at 1,370 feet in salt, and its No. 5 Ogg, C NW SE Section 35-24-36, is drilling at 600 feet in red beds.

One new location in the Cooper Pool was staked in the Empire Gas & Fuel Co.'s No. 2 Everett, C SE SW Section 35-24-36.

Eunice Area

Amerada Petroleum Corp.'s No. 1-D State, C NW NW Section 1-20-36, a wildcat 7 miles north of production, which showed for 7,000,000 feet of gas in 17 minutes last week on a drill stem test at 3,255 feet, is drilling at 3,503 feet in lime and continuing to hold first place in interest. It had more shows of gas 3,375-80 and 3,395-3,405 feet and a show of oil at 3,495-98 feet.

Atlantic Oil Co.'s No. 1-F State, C SW SW Section 29-21-36, at the south end of the developed area, may make a small well. It was plugged back from 3,977 feet to 3,968 feet and shot with 125 quarts, after which it made 5 bbls. of fluid an hour, of which 50 per cent was water. It was then treated with 5,000 gallons of acid and is swabbing for a test. It is estimated at 25 bbls. of oil and 75 bbls. of water. The 2½-inch is at 3,938 feet.

Repollo Oil Co.'s No. 1 Adkins, NW cor. SE Section 9-21-36, is spudding at 100 feet in the red beds, and the General Crude Oil Co.'s No. 1-D State, C NW SW Section 32-21-36, is rigging up rotary after spudding to 70 feet, where it set the 15½-inch. Skelly Oil Co.'s No. 1-C State, C NE NW Section 29-21-36, set the 7-inch at 3,799 feet with 480 sacks, and is waiting.

The Continental Oil Co.'s No. 8-A Meyers,-3, C SW SW Section 8-21-36, is drilling at 2,841 feet in anhydrite, and its No. 18-A Meyers-1, C NE NE Section 18-21-36, is drilling at 2,631 feet in salt. Same company's No. 9-B Meyers-2, C SE NW Section 9-21-36, has rig up, and its No. 30-A Lockhart-1, C SE NE Section 30-21-36, is a near completion at 3,940 feet. It is testing, but has not been gauged, after running the 2½-inch to 3,938 feet.

The Tide Water Oil Co.'s No. 3 State-Foster, C NW NE Section 8-21-36, is drilling at 3,646 feet in lime, and the Atlantic Oil Producing Co.'s No. 1-C State, C SW SE Section 5-21-36, has rotary rig up after spudding to 72 feet. Shell Petroleum Corp.'s No. 1-A State (formerly State-Endura), C SE NE Section 12-21-35, which swabbed 2½ bbls. an hour, 20 per cent water, at 4,000 feet, was deepened to 4,095½ feet and is preparing to test. Same company's No. 1-B State, C NW NW Section 29-21-36, cemented the 9⅝-inch on bottom at 3,080 feet with 650 sacks.

The Gypsy Oil Co.'s No. 1 Houston, C SE SE Section 7-21-36, is drilling at 2,720 feet in anhydrite, and its No. 3 Bell-State, C SW SW Section 9-21-36, began spudding January 18, set the 10¾-inch at 361 feet with 100 sacks, and is drilling at 550 feet in red beds. Peerless Oil & Gas Co.'s No. 1 State, C NW SW Section 29-21-36, which swabbed 400 bbls. of fluid a day, 35 per cent of which was water, after treating with 4,000 gallons, is shut down at 3,974 feet for orders.

Jal Area

One completion and one new location were reported in the Jal Pool. The Continental Oil Co.'s No. 12-A Wells-2, C NW NE Section 12-25-36, the most northerly producer in the pool, was completed at 3,518 feet for 240 bbls. of oil and 2,700,000 feet of gas the first 24 hours. It was plugged back to 3,489 feet to shut off water and was treated with 1,500 gallons of acid. The pay was at 3,290-3,480 feet and the 7-inch was set at 3,288 feet. The elevation is 3,197 feet.

The new location is the Repollo Oil Co.'s No. 2 Gloyd, NW cor. SE Section 12-25-36, an east offset to its No. 2 Hanagan, a recent completion.

R. H. Henderson and others' No. 1 Langley, C SE SE Section 8-25-37, is rigging up cable tools after spudding to 15 feet. Phillips Petroleum Co.'s No. 1 Worth, C NE NE Section 3-25-36, began spudding January 19, set the 15½-inch at 166 feet with 150 sacks, and is drilling at 617 feet in red beds. The Southern Exploration Co.'s No. 2-A Ascarate, C SE NW Section 24-25-36, is waiting after drilling at 3,293 feet and setting the 7-inch at 3,234 feet with 200 sacks. A drill stem test at 3,232-93 feet yielded 300 feet of drilling mud in half an hour.

The Continental Oil Co.'s No. 13-A Sholes-2x, NW nor SE Section 13-25-36, set the 7-inch at 3,280 feet, 20 feet off bottom, with 300 sacks, and is waiting.

Lea Area

One new location was made in the Lea area in Anderson & Prichard's No. 1 Fisher, C SE NE Section 8-20-35, on acreage obtained from Stanolind Oil & Gas Co. The old Midwest Refining Co., which was absorbed by the Stanolind company, started a test in 1929 on the Fisher permit in the SE NW NE Section 5-20-35, a mile to the north of the new location, but abandoned it after going to only 504 feet.

The Texas Co.'s No. 1 Swearingin, C NE SW Section 8-20-34, which had 1,000 feet of salt water at 3,610 feet, deepened to 3,828 feet and is running the 6¼-inch. Same company's No. 1 Moore, C NW SE Section 21-20-32, is drilling at 1,645 feet in salt. The Ryan Consolidated Petroleum Corp.'s No. 1 Acree, C NE NW Section 35-20-32, is drilling below 545 feet, and R. H. Henderson and others' No. 1 Russell-Steele, C NE NW Section 24-20-33, set the 10-inch at 850 feet and is drilling at 1,075 feet in the red beds. The Argo Royalty Co.'s No. 1

Burner, SW NE NE Section 6-20-32, is waiting on spudder.

San Simion Area

Humble Oil & Refining Co.'s No. 1 Saunders, C NE NE Section 4-22-34, is fighting cave at 490 feet.

Maljamar Area

Maljamar Oil & Gas Co.'s No. 4 Baish, NE SE NE Section 21-17-32, was deepened 13 feet to 4,093 feet and is estimated at 135 bbls. a day from the pay at 4,070-93 feet. It is being treated with 2,000 gallons of acid.

Eddy County

One new location was made in the North Artesia district in Tignor, Etz & Keyes' No. 1 State, C NE NW Section 15-17-28, for which materials are moving in. The Coronado Exploration Co.'s No. 1 Anderson, C NE NW Section 13-20-23, Seven Rivers district, is building rig. Getty Oil Co.'s No. 7 Dooley, SW cor. NW Section 24-20-29, Getty Pool, is waiting on rotary after spudding to 230 feet where the 16-inch was set. Neil Wills and others' No. 1 Montgomery, SW NE Section 10-23-30, Big Eddy district, is drilling at 3,560 feet in anhydrite. Skelly Oil Co.'s No. 1 Dow, C SW SE Section 15-17-31, Maljamar district, is repairing damage caused by fire. Last total depth was 2,575 feet.

COLORADO

Adams County

Riddle Petroleum Co.'s No. 1 Baxter, C SW Section 2-3s-66, Derby district, is rigging up rotary and drilling another water well. The latter is making hole at 900 feet and will go to the Milliken sand at around 1,200 feet. It is hoped that gas will be encountered in this horizon.

Boulder County

Leslie R. Steele and others' No. 1 Maxwell, SW NE NW Section 24-1n-71, an operation not heretofore reported, has spudded and set surface pipe. The location is 3 miles west of the old Boulder Field and in the foothills.

Lincoln County

Consolidated Smelting & Metals Corp.'s No. 1 Hancock, NE cor. SW Section 7-17-52, Haswell district, is drilling at 730 feet.

Moffat County

Stanolind Oil & Gas Co.'s No. 35-SD Parkinson, SE cor. NE Section 22-2n-92, Iles Dome, set the 12½-inch at 112 feet and is drilling at 906 feet. The objective is the Sundance, expected below 3,200 feet.

Montezuma County

McElmo Oil Co.'s No. 1 West, NE NW NE Section 31-36-17, McElmo district, is bottomed at 3,000 feet and waiting for new cable. It is carrying the 6⅝-inch. This well is located 2 miles southwest of a test drilled in 1922 by the Midwest Oil Co., which had several good shows of oil and gas, the best oil show being at 4,150 feet, in the Pennsylvanian. No. 1 West expects to reach the top of the Pennsylvanian at around 3,200 feet.

Park County

South Park Oil Co.'s No. 1 State, SE cor. SW Section 16-11-75, Hartsel district, is drilling at 985 feet. The 10-inch was set at 775 feet.

Prowers County

Trojan Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, Lamar district, is installing new 6,000-foot cable at 4,750 feet. Hole is bottomed in the lower Cherokee. Unless commercial production is encountered within the next few hundred feet, the 6⅝-inch will be underreamed from 3,941 feet and hole will be carried on down to test the Ordovician.

WYOMING

Big Horn County

Ohio Oil Co.'s No. 1 Hoskins, SW cor. Section 14-56-97, Byron district, is drilling at 5,002 feet. It has changed over from steam to electric power for the rotary.

Carbon County

Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, is fishing for parted pipe at 5,931 feet. If the parted 4¾-inch is recovered, the hole probably will be plugged back to 5,250 feet and oil show tested. Same company's No. 1 Whitford, SW SE SE Section 24-20-84, is drilling at 3,498 feet. Ohio Oil Co.'s No. 1 Morris, C NW SE Section 6-20-77, Diamond Dome, is drilling at 5,744 feet in red beds, and its No. 1 Kyle, NE SE NE Section 26-21-79, Medicine Bow district, is drilling at 4,039 feet. Argo Oil Co.'s No. 1 Johnson-Union Pacific, NE cor. SE Section 5-24-87, O'Brien Springs, is running the 7-inch to 3,173 feet to shut off water in the Dakotas.

Fremont County

The Mid-American Oil Co.'s No. 2 Government, C NE SW Section 14-28-92, Sheep Creek, is drilling at 1,800 feet.

Natrona County

Bessemer Oil Co.'s No. 6 Government, NW Section 18-33-82, Poison Spider district, a first report, is moving in materials.

Niobrara County

Ohio Oil Co.'s No. 1 Rohlf, NE SE Section 32-36-65, Lance Creek, is drilling at 1,544 feet in shale.

Park County

Rocky Mountain Gas Co.'s No. 1 Oregon Basin Oil & Gas Co., C SW NW Section 32-51-100, South Oregon Basin, is rigging up.

Washakie County

Chris Oil Syndicate's No. 1 Government, C SW SW Section 31-48-90, Hidden Dome, is drilling at 1,830 feet. Sand at 1,550-60 feet was dry.

Sweetwater County

Vermillion Oil Co.'s No. 1 State, SW

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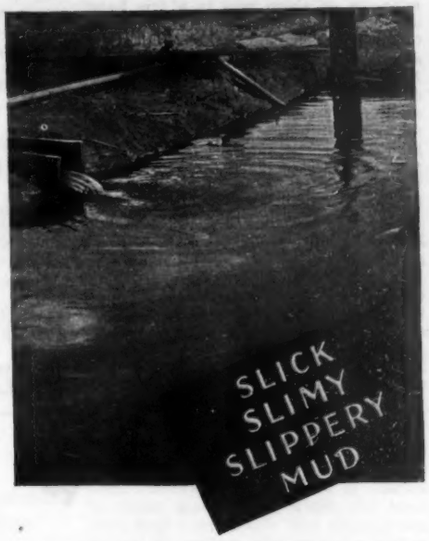

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cor. Section 16-12-09, Hiawatha district, underreamed the 6⅝-inch to bottom at 4,685 feet and shut down.

Weston County

Conway Oil Corp.'s No. 1 Government, C SE NW Section 7-41-60, Dewey district, is drilling at 1,286 feet.

MONTANA

A Chinook wind which lifted the temperature in the Cut Bank Field from 30 below to 40 above zero in a few hours on January 25, brought relief to operators whose wells were shut down and a number of drilling wells have resumed. Most of the pumping wells were shut down during the blizzard. The principal activity at present is in Cut Bank, where town lot drilling is the vogue. Two new locations in the town were staked the past week. These are R. C. Jeffries' No. 1 Hope, Lot 10, Block 18, Original Survey, Section 12-33-6w, digging cellar, and Askins' No. 1 Askins, Lot 24, Block 33, Jacobson Addition, Section 12-33-6w, digging cellar.

A. B. Cobb's No. 4 Walberger, SE cor. Section 35-35-6w, has resumed and is cementing the 7-inch at 2,750 feet. Fist and others' No. 1 Donen, Lot 10, Block 11, Original Townsite Survey, Section 12-33-6w, is drilling at 1,150 feet, and the Hannah-Porter Co.'s No. 1 International Harvester, Lot 7, Block 18, Original Townsite Survey, Section 12-33-6w, is moving in materials. Kately & Kaup's No. 1 Drumheller, Lot 1, Section 10-34-6w, is building rig. Indian Oil Co.'s No. 1 Reikhoff, SW SE Section 3-34-6w, which swabbed 80 bbls. after standing two weeks at 2,950 feet, total depth, is drilling deeper and making hole at 2,957 feet. Marshall and others' No. 1 Wilkins, NE SE NE Section 12-33-6w, is resuming at 1,950 feet. Montana Power Gas Co.'s No. 1 O'Brien, C SE SE Section 31-34-5w, is resuming at 75 feet. Watson and others' No. 1 Miller, W NW NE Section 1-33-6w, is drilling at 2,425 feet, and Wickstrand & Walgren's No. 1 Simero, Lot 5, Block 17, Section 12-33-6w, is resuming at 1,550 feet.

DEATH OF A. J. BOND

A. J. Bond, age 76 years, a director in the Kendall Refining Co., died in Bradford, Pa., Sunday, January 27. Mr. Bond will be best remembered by the oil producers of the big Bradford Field for his great service as a county commissioner. In the 12 years he served in that office, concrete roads were built through every part of the Bradford Field, with the roads so routed that they would best serve the oil industry in that hilly region.

Gas Possibilities in St. Lawrence Valley Continue to Interest Quebec Province

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

QUEBEC, Canada, Jan. 19.—While the results of recent drilling operations in the province of Quebec, and particularly the deep drilling operations on the south shore of the St. Lawrence, have been largely negative, the operations carried on since 1929 have thrown considerable new light on the oil and gas prospects in the St. Lawrence Valley.

Information furnished by J. E. Perrault, minister of mines for Quebec, shows that the prospective natural gas area of the province includes some 4,500 square miles of Palaeozoic strata of Trenton and later age, occupying lowlands of the St. Lawrence between Quebec and Montreal. The area forms a somewhat irregular triangle, with Quebec city as its apex and a more or less direct line between Terrebonne and the head of Lake Champlain as its base. The base of the triangle thus comes fairly close to the United States boundary.

The formations dip slightly to the south, away from the Precambrian rocks which form the edge of the Laurentian plateau along the north shore of the St. Lawrence. The oldest (Cambrian) strata thus form a fringe along the ancient pre-Cambrian rocks, while as one advances from the pre-Cambrian axis the Ordovician strata form bands of successively younger formations. The surface deposits in most parts of this area are exceedingly thick, so that it is difficult to determine the nature and extent of the structural folding and faulting.

Natural gas occurrences have been numerous in this area. Dr. W. A. Parks of the University of Toronto, who geologized the St. Lawrence Valley five or six years ago, defined nine distinct areas with gas potentialities. These included St. Genevieve district in Champlain County, St. Gregoire district in Nicolet County, Louiseville district in Maskinonge and St. Maurice Counties, Vercheres district in Vercheres and Richelieu Counties, Yamaska district in Yamaska County, St. Hyacinthe district in St. Hyacinthe County, Montreal district in Laval and l'Assomption Counties, Lanoraie district in Berthier County and Portneuf district in Portneuf County.

Natural gas seepages were known in the St. Lawrence Valley from the time of the first white inhabitants. The first attempt to develop petroleum, from which the gas was thought to originate, was made in 1880 at Louiseville by Piret & Genest of Three Rivers; a second test being drilled at St. Henri de Mascourche in L'Assomption County. The latter well at 187 feet struck a large gas flow, and now, more than 50 years later, it is still producing sufficient gas to light and heat one dwelling.

In 1885 a test at St. Gregoire in Nicolet County, drilled to 1,115 feet, secured sufficient gas for six dwellings; and now after half a century of production is still supplying enough for three. In 1886 the Natural Combustible Gas Co. was organized which secured exclusive rights to drill for natural gas in Quebec. Four wells put down at Louiseville supplied gas to the waterworks company.

In 1904 the Canadian Gas & Oil Co. was organized. After some unsuccessful tests in Nicolet County, it drilled several producers in the Louiseville district. This was in 1905 piped to the town of Louiseville and later to the city of Three Rivers. The supply was sufficient for domestic purposes, but when industrial plants began to draw on the lines it proved insufficient. In 1907 depleted supply and financial difficulties forced the company into liquidation.

Between 1909 and 1914 a number of companies drilled in Vercheres, Richelieu, St. Hyacinthe and Yamaska Counties. No. worthwhile production was secured and most of the tests never even reached the Trenton limestone. After 1914, except for a few shallow wells on the north shore, drilling activity was at a standstill till about 1929.

In 1929 and 1930 Dr. W. A. Parks made a survey of the oil and gas prospects of the St. Lawrence Valley for the Quebec mines department. Late in 1929 extensive claims were staked by various interests in the counties of Laval, L'Assomption, Berthier and Portneuf along the Ordovician belt on the north shore of the St. Lawrence and in Nicolet and Yamaska Counties on the south shore.

Since 1930 seven deep tests have been drilled on the south shore. Drilling difficulties were met with in some, including bad caving in the Lorraine and Utica shales, and two tests had to be abandoned owing to fishing jobs.

Richelieu Gas Co.'s No. 1 at St. Denis, St. Hyacinthe County, started in April, 1931, was abandoned August of the same year at 2,150 feet owing to a fishing job. Richelieu's No. 2, also located at St. Denis, spudded in August, 1931, and finished in May, 1932, at 4,150 feet. South Shore Oil Lands' No. 1, at La Visitation, Yamaska County, spudded in October, 1931, was abandoned in March, 1932, at 3,200 feet. South Shore's No. 2, also at La Visitation, started in April, 1932, finished in August of the same year at 4,400 feet. Canadian Seaboard Oil & Gas Co.'s No. 1, at St. Gerard, Yamaska County, spudded in November, 1931, finished in December, 1932, at 6,160 feet. Mexican Seaboard Oil Co. drilled two deep wells in Nicolet County. No. 1, at Ste. Angele, started in Feb-

(Continued on Page 86)

Constructing a pipe line through water soaked sand in Northern Indiana

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TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Several Hydrocarbons Obtained From Cracking of Propane

Do you have any information showing what products are obtained when propane is heated at around 1000°F.? Are there any references on this subject?—A. B. P.

The Pyrolysis of Carbon Compounds, by Hurd, pages 64-66, gives results of the decomposition of propane under several conditions. A sample containing 97.5 per cent propane showed a volume increase of 17.2 per cent when heated at 650° C. (1,202° F.) for 11 seconds. The final gaseous products contained: Propane, 58.6 per cent; methane, 14; hydrogen, 7.5, and unsaturated hydrocarbons, 18.1 per cent.

Other heated propane, 99 per cent purity, in a silica flask at 575° C. and 760 mm. After six minutes results obtained:

Pyrolysis of Propane Products at 575° C

	Per cent
Propane	50.1
Propylene	10.7
Hydrogen	8.6
Methane	15.3
Ethylene	10.3
Ethane	3.8
Nitrogen	0.9
Higher hydrocarbons	0.4

"The formation of aromatic compounds begins at 750° C. and is coincident with an increase in the rate of formation of carbon and hydrogen."

Nickel, iron and cobalt are effective anticatalysts. Increase in pressure inhibits tar formation. The book mentioned contains numerous references.

Thermo-viscosity of Petroleum Products and Its Significance

What is the relation between a light fuel and its thermo-viscosity; i.e., what does the thermo-viscosity really indicate?—R. F. L.

The Saybolt thermo-viscometer is an instrument designed for use in determining the viscosity of the so-called light products of petroleum, such as gasoline, naphtha and kerosene; that is, liquids having a viscosity of less than 32 seconds at 100° F., Saybolt Universal. The thermo-viscosity is expressed by a unit which is 10 times the number of seconds observed when making the test.

The instrument is essentially a glass capillary set in the liquid under test. The capillary is freed from air and the time determined for the liquid to rise to a definite mark on the tube. The number of seconds required for the liquid to reach the mark is multiplied by 10 to give the thermo-viscosity at the working temperature, which must be between 60° and 90° F. The viscosity found at the working temperature is corrected to 60° F. by means of a table.

The thermo-viscosity indicates nothing more than viscosity. A refiner may make certain deductions from the determination; however, these may or may not be of use under other conditions. In a general way, it may be true that when this figure is high poor burning may be expected for the kerosenes and high endpoints for the gasolines and naphthas. Some refiners use the test as a guide when cutting out the kerosene stream. It is also used by some as an indication of burning quality of an illuminating oil, but the standardized burning test for kerosene, A.S.T.M. Test D 187-30, 1933 Book of A.S.T.M. Standards, Part 2, page 742, is more reliable for this purpose. Also, the distillation test is more reliable for showing the presence of heavy oils with high endpoints.

The thermo-viscosity apparatus and test method have not been standardized.

Preparation of Doctor Solution and Its Application

What are the directions for making doctor solution? What are the proper steps in the use of it so that the best results will be obtained?—J. J. K.

Sodium plumbite, or doctor solution, is prepared for plant use of various concentrations, commonly between 12° and 20° Be. The sodium hydroxide, caustic soda, is dissolved either by directing a stream of exhaust steam into the drum, which is set so that the liquid will drain into a kettle or tank, or the punctured drum is placed in a tank and then covered with water where it is left until all solid material has dissolved.

Sodium hydroxide dissolves about 3 per cent litharge (lead oxide PbO), so something in excess of this quantity is put into the caustic soda solution and then the mixture thoroughly agitated with steam; then allowed to cool and settle for about 12 hours. The excess litharge will settle to the bottom, above which the liquid may be drawn off for use.

Many refiners use a doctor solution of about 12° Be., but some prefer a solution of higher concentration of caustic. The more concentrated, higher Be. degrees, solutions are recommended to avoid excessive foaming and formation of emulsions in the treaters, which, in addition to causing low capacities, results in high processing losses. Weak solutions mean large volumes but greater surface contact and consequently higher efficiencies with respect to lead consumption.

The chemical reaction of the doctor treatment is completed by the addition of sulphur. The most satisfactory system is to have two doctor units, continuous treater, where the oil passes through the first plumbite unit and then to the second. The sulphur being added to the second for the purpose of aiding in the formation of the sulphides and rapid settling. Great care must be exercised not to add an excess.

Considerable quantities of gasoline and kerosene are oversulphured and consequently damaged because of failure to have this stage of the refining operation under adequate supervision.

Natural Gasoline as Distinguished From Casinghead Gasoline

Is there a definite meaning for the term natural gasoline? How does natural gasoline compare with casinghead gasoline?—M. A. E.

Natural gas, the source of natural gasoline, is a mixture which varies in composition to a considerable degree and just what may be obtained from a natural gas will be related to the quality of the gas.

All natural gas does not contain gasoline, or products that are liquid at normal temperatures, so it must be assumed that the gas under discussion does contain products that may be reduced to the liquid condition by some form of condensation. When the properties of the liquid are fixed, at some selected conditions of temperature and pressure, they fix the yield, which is limited to the quantity of the materials existing in the gas. If the conditions under which the extraction is made are changed, then the properties of the product must also change.

The connections attached to the top of the casing in a well are called the casinghead, so the gas passing through the connection is called casinghead gas. It is raw gas, untreated gas, as distinguished from line gas or tail gas, from which the gasoline has been extracted. Casinghead gas is usually obtained from a well that is also producing oil. The gasoline extracted from such gas may be called casinghead gasoline.

In the early days of the industry large quantities of a very volatile liquid were obtained from the gas by simply cooling with the aid of high pressure. The composition of the raw gas varied and no two plants for making the gasoline were operated under exactly the same conditions, which resulted in a product of quite varied characteristics being marketed from different manufacturing plants. There were no standards for this product, consequently there developed much objection to it when blended with refinery gasoline to be used as motor fuel, because of its tendency to form gas and produce what is termed vapor lock, or stoppage of the flow of gasoline. The methods for extracting gasoline from natural gas have been improved and standards have been adopted so that now a uniform and stable product, called natural gasoline, may be obtained. The word natural distinguishes the modern product from the objectionable material, casinghead gasoline, of indefinite composition.

Kauri-Butanol Solvency Test for Petroleum Naphthas

We would appreciate complete details of the solutions used and the method of running the Kauri-Butanol Solvency Test, as used by the paint and varnish manufacturers to determine the solvency of various gums and resins in their petroleum naphtha thinners.—D. H. J.

Kauri gum, also known under numerous other names, such as dammar, kaury, courie, copal and similar words of different spellings, may be obtained from pineaceous trees of the genus dammara. The trees grow to be very large in New Zealand, Australia, Fiji Islands, East Indies, Brazil and elsewhere.

Kauri gum and copal are both obtained from fossilized deposits found by digging in waste places from which the trees have long disappeared. The deposits are located by natives who prospect with a slender spear, thrusting this into the ground until they strike gum, often found in masses weighing 100 pounds or more.

The gum is usually graded according to color, which may vary from almost colorless through amber, brown to black. Only the purest variety should be used for making the butyl alcohol solution used in the solvency test applied to special naphthas.

Kauri gum and other resins dissolved in the alcohols, ethers, and ketones are extensively used when making varnish. The varnish makers found that certain petroleum naphthas could be used under some conditions for dissolving the gums and thus reduce the quantity required of the more expensive organic solvents. The extent to which a petroleum naphtha will replace an alcohol, etc., as a solvent for the gums is measured by the determination of the saturation point. This is conveniently found by means of a kauri gum solution. This gum is obtainable in pure form from dealers in gum and firms selling chemicals and laboratory supplies.

The test has been described by J. R. Stewart, Cir. 378, American Paint and Varnish Manufacturers Association, from which the following has been arranged:

Preparation of the solution: One hundred grams of carefully selected kauri gum is weighed into a convenient distilling flask, 500 grams of butyl alcohol added, and the flask then connected with a water-cooled reflux condenser. The mixtixe is heated to the boiling point of the alcohol, 114.4° to 116.6° C. (238°-242°F.) and the heating continued until complete solution of the gum. This solution is cooled, and after 96 hours is decanted into a clean, dry bottle and well stoppered.

Determination: Twenty grams of the gum solution is weighed into a 200 c.c. Erlenmeyer flask, and the naphtha being examined titrated into it from a 50 c.c. burette, maintaining a temperature of 25° C. (77° F.), within half a degree.

The titration is continued until print of this size, 10 point, is no longer legible when viewed through the solution. The test print is placed under the flask.

The number of c.c. required is the kauri butanol value. A good quality solvent of this type will usually show a kauri-butanol value of close to 35 c.c.

NATURAL GAS DEVELOPMENTS

New York-Pennsylvania Gas Field Developments

WELLSBORO, Pa., Feb. 4.—Low temperatures slowed up activity in the North Central Pennsylvania and adjacent New York gas fields in the week ending February 1. In New York, Walters & Haughey completed No. 2 Seth Allen, Tyronne Township, Schuyler County, at a total depth of 2,119 feet for a production of 1,460,000 feet from the Tully sand. Initial rock pressure was 380 pounds. In Pennsylvania, East Penn Development Co. reported the test on the Presbyterian Church property, in Shippen Township, Tioga County, dry and abandoned at 4,491 feet. Potter Development Co. abandoned its location for No. 2 Penn Stave, in Hebron Township, Potter County.

Pennsylvania Drilling

E. Cabot was shut down at 6,253 feet on the W. F. Burroughs farm, Gaines Township, Tioga County. United Producers was drilling at 1,505 feet on the J. Ruppert farm, Hebron Township, Potter County. J. B. Reed was still shut down on the George C. Page farm, Allegany Township. Updegraph was drilling at 510 feet on the O'Donald farm, Genesee Township. Hanley & Bird were drilling at 975 feet on the Effie Slingerland farm, Allegany Township. Penn United was drilling at 512 feet on the A. J. Carpenter farm, Hebron Township. Same company was drilling at 1,205 feet on the A. Sturdevant farm, same township. Potter Development Co. was drilling at 115 feet on its No. 2 B. L. Langworthy, same township. Sylvania was moving in for its No. 1 Z. L. James, Allegany Township, and building rig for its No. 2 Z. L. James, same township.

New York Drilling

Higgins and others were shut down at 2,884 feet on the Steadman farm, Allen Township, Allegany County. The Tully lime was found at 2,814 feet in this well. Cunningham Natural Gas Co. was drilling at 1,750 feet on the Maxwell farm, Willing Township, Allegany County. Harry Erwin was drilling at 3,367 feet on the Edward Fisk farm, Thurston Township, Steuben County. The Tully lime was reached at 3,363 feet on this test. A. B. Button is still shut down at 810 feet on the Earl Dodson farm, Junius Township, Seneca County. Trumbull is shut down at 900 feet on the W. B. Lasher farm, Throop Township, Cayuga County. Great Northern is still shut down on the Van Orman farm, Briston Township, Ontario County. Belmont Quadrangle Development Co. made a location for No. 1 Taylor, Leon Township, Cattaraugus County. E. G. & F. is moving in on the M. Costello farm, Willing Township, Allegany County.

Clarion County

Bummer Oil & Gas Co. completed an oil producer on the Smith farm, Paint Township, Clarion County, at a depth of 1,117 feet. This well was pumping between 3 and 4 bbls. daily. Alum Rock Gas Corp. is in the slate at 400 feet on the Cummings farm, Ashland Township, same county. Huefner is fishing at 815 feet on the Weaver farm, Knox Township, same county. The Bummer company made a location for its No. 2 Smith, in Paint Township.

LONE STAR RATE CASE

AUSTIN, Tex., Feb. 4.—The State's appeal of the Lone Star Gas Co. rate case has been set for submission to the Third Court of Civil Appeals on February 27. A Travis County District Court jury held that an attempted rate reduction for the several score towns and cities was unjust, and the State appealed. Numerous questions in connection with the State's right to fix rates of utilities are in appeal.

West Ohio Gas Co. Rate Upheld by High Court

The U. S. Supreme Court, ruling that a 4.5 per cent rate of return for the period 1928-1931 was too low, upheld the West Ohio Gas Co., affiliate of Midland Utilities Co., in its rate dispute with the Ohio Public Service Commission. Both Midland Utilities and Ohio Gas are in process of reorganization under Section 77(b) of the amended federal bankruptcy act.

The dispute involved rates for gas service in the cities of Lima and Kenton, Ohio. Under the state commission order the company would have been required to reduce its rates and refund amounts estimated at $370,000 to $400,000 to consumers for past overcharges. During the litigation the company collected its higher rates under bond to assure payment of refunds.

The Supreme Court remanded both the Lima and Kenton cases for further action. Action was brought before it on appeal from a ruling of the Ohio Supreme Court upholding the order of the commission fixing rates for a five-year period from April 19, 1928. The order set aside rates established earlier by city ordinances in the two cities involved.

The company on August 29, 1934, obtained an injunction in the federal courts restraining the commission from prosecuting it for failure to establish lower rates and make refunds. It was asserted that the company was bankrupt and that "a refund at this time would endanger its financial stability."

The company's rates in Lima were $1.25 for the first 400 feet and ranged down to 75 cents per 1,000 feet for more than 35,000 feet. The city ordinance fixed a rate of 90 cents for the first 1,000 feet and rates ranging down to 55 cents for more than 10,000 feet. The latter rates were ruled too low by the commission which fixed rates of 90 cents for the first 400 feet down to 60 cents per 1,000 feet in excess of 10,000 feet.

MAYORS ASK GAS INQUIRY

COLUMBUS, Ohio, Feb. 4.—Characterizing the natural gas industry of the nation as a "monopolistic octopus," mayors of 30 middle western cities memoralized the U. S. Senate to conduct a sweeping investigation of the entire industry and to place it under effective regulation.

The resolution charged that millions of feet of natural gas are being wasted in Texas producing fields; that powerful utilities are buying up small pipe line companies to stifle competition, and that there is a conspiracy to hold rates above an "honest level."

Another resolution was adopted organizing the group of mayors as "The Cities' Alliance." John W. Smith, former Detroit mayor and president of the council there, was elected chairman. Daniel W. Hoan of Milwaukee, was named vice chairman.

NEW GAS LINE

CHATHAM, Ontario, Feb. 2.—The Southern Ontario Gas Co. is laying 4½ miles of 3-inch line in Kent County to deliver production from the wells of the Gas Producers' Syndicate in the De Clute Field to its main transmission line.

Texas Regulatory Bill Before the Legislature

AUSTIN, Tex., Feb. 4.—The public utility regulation bill, introduced in the House with the reported approval of Gov. James V. Allred, is a compound from the statutes of several states, Wisconsin, California, Ohio, Massachusetts, Colorado, Alabama and Indiana.

The Board of Public Utility Commissioners the bill would create would be endowed with all the authority the Railroad Commission now exercises with respect to the production and transportation of natural gas, but in addition the board would fix the reasonable price of gas at the wells, which pipe line companies would be required to pay, and fair and reasonable rates for transporting, producing, buying, selling and delivering natural gas. Also it would establish a fair division of the proceeds from the sale of gas among the companies producing, gathering, transporting and selling it.

Domestic consumers would have preferential right of use, and when the available supply was insufficient to satisfy domestic and industrial requirements, production for any other purpose would be forbidden by the board, which also would allocate the total of allowed production among the several wells of the field on an equitable basis. If full production was in excess of the reasonable market demand for light and fuel purposes, the board could inquire into the market demand for such gas for other lawful purposes, and allow production for those purposes to the amount which it deemed proper.

The governor would appoint the board members who would receive $10,000 annually, would be required to take oath they were not interested in any public utility and would be removed from office and subject to fines if subsequently they became financially interested in any type of utility.

The board would be furnished with a complete technical staff. A tax of one-half of 1 per cent of the gross receipts of utilities would be levied to support the board.

The board would be given original jurisdiction over utility rates in all cities except where that right is reserved in the municipality.

The maximum rate of return to be allowed utilities would be 8 per cent on the "prudent investment cost under economical management." The minimum would be 4 per cent.

The board would fix the price to be paid for gas in the field. The bill would require ratable taking from a gas pool.

OIL AND GAS ASSOCIATION

CALGARY, Alberta, Feb. 2.—At a dinner meeting of the Oil and Gas Association of Alberta, held recently at the Renfrew Club, President Herbert Greenfield reported on the efforts, so far unsuccessful, to defer the increase in the provincial royalty on oil production. A resolution of consolence on the death of W. E. McLeod, a director of the association and a pioneer of Alberta oil development, was passed on motion of W. S. Herron and Fred M. Graham. L. A. Boyd, in charge of the new Gas & Oil Products, Ltd., absorption plant in South Turner Valley, gave an address on "natural gasoline."

LONDON GAS PROPOSITION

LONDON, Ontario, Feb. 2.—A petition for reopening negotiations for a natural gas supply for London has led the city council to appoint a committee to confer with the City Gas Co. The latter, a subsidiary of the Union Gas Co., last year proposed to pipe gas from the Dawn Field to London, but owing to inability to reach an agreement the proposal was dropped.

Franchise Conference in Progress in Tulsa

Officials of the Oklahoma Natural Gas Corp. will accept a franchise in Tulsa only if it is on a "reasonable" basis, Mayor T. A. Penney and the city commission were informed during a conference. It was stated during the meeting that a franchise tax of 2 per cent of gross receipts is the average in a large group of cities. The representatives of the company indicated that on no consideration would it agree to a 4 per cent tax or a suggested lowering of the Tulsa gas rate from 45 to 35 cents per 1,000 feet.

"The company representatives told us the financial condition of the utility would prevent their even so much as considering either of these proposals at this time," the mayor said. "They said also that investigation would disclose Tulsa now has a lower rate than is being paid by most cities in this part of the country."

The company was notified the city will insist upon putting a franchise before Tulsa's voters in the near future with the proposed franchise probably setting the city tax at 2 per cent. Mayor Penney reported. It is estimated that on the company's present gross income this would mean approximately $35,000 annually to the city.

Efforts have been started to obtain passage by the legislature of an occupation tax statute bringing utilities into this classification. Efforts also will be made by the mayor to enlist the support of Shawnee, Okmulgee, Muskogee, Ardmore and other Oklahoma points where the company has been operating without a franchise. "Passage of the proposed statute making it possible for cities to levy occupation taxes against transportation, gas, telephone and power companies appears to be the only solution to difficulties now facing many municipalities," City Attorney H. O. Bland, said.

MOVED TO SALINA, KANS.

General offices of the Natural Gas Distributing Co., formerly in Lincoln, Neb., have been moved to Salina, Kans., and operation of the company has been taken over by the Kansas Power & Light Co. Nebraska headquarters of the Natural Gas Distributing Co. have been transferred to Holdrege, with Luman F. Collins in charge as district manager. All Nebraska activities of the company will be handled through the Holdrege office. The company is discontinuing the merchandising of gas appliances and equipment. Mr. Collins was formerly district superintendent of the Public Service Co. and Peoples Gas Co., subsidiaries of the Kansas Power & Light Co. with headquarters in Pratt, Kans.

UNION GAS SALES IMPROVED

CHATHAM, Ontario, Feb. 2.—The Union Gas Co., which serves consumers in southwestern Ontario, reports for December, 1934, an increase in natural gas deliveries of 7 per cent over December, 1933. Lower rates for gas for heating purposes put into effect last summer, together with intensive sales effort, have increased the number of heating consumers over the previous year. The number of gas-burning appliances sold in the nine months ending December 31, shows an increase of 70 per cent over the corresponding period in the previous year.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depths of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Use of Seismographic Method in Search for Oil Structures

May I go to you for information regarding the seismographic method of oil exploration? Perhaps you have published articles dealing with this subject, or you may be able to refer me to some other literature.—A. A.

A good brief description of the seismic method of exploration is contained in Prof. L. C. Uren's book, "Petroleum Production Engineering." Quoting from it:

"Among the more successful of the geophysical methods thus far used in petroleum exploration are those which are based upon the varying speed with which rocks of different types transmit vibrational waves. Their ability to do this is a function of their elasticity.

"Rocks possess this property in varying degree, the softer, less thoroughly consolidated rocks and formations transmitting vibrational waves less rapidly than the harder crystalline and well-consolidated formations.

"It is also found that the older formations generally display a higher speed of transmission of seismic waves than do the younger rocks. Speeds of transmission of seismic waves range from 900 to 7,000 meters (2,952.75 to 22,965.83 feet) per second.

"In the practical application of this method vibrational waves are developed by detonation of dynamite at a selected point, while sensitive seismographs are placed at some distance away in various directions to receive the vibrations transmitted through the intervening rock formations and records their time of transmission. The time of transmission is very brief; only a matter of a few seconds at most, and an accurate and dependable method of conveying the exact time of the explosion to the recording instruments must be provided.

"This is conveniently accomplished by wireless telephony, an electrical circuit being automatically broken by the explosion. Vibrations of the receiving instruments are recorded mechanically and photographically together with a suitable time scale, by reference to which the interval between time of the explosion and the arrival of the vibratory waves may be determined. Time intervals of 0.01 second can be measured.

"Several different vibratory waves may reach the recording instruments, and it is important to be able to distinguish between them. One wave moves through the surface formations at comparatively slow speed. This is of little significance.

"A second wave is transmitted downward into the deeper formations, which often contain some mass of stratum of more elastic material that transmits the vibrational wave more rapidly. Though the path of travel is longer, this deep-seated wave may arrive first at the recording instruments.

"This later wave, which is of particular interest to the geophysicist as an indication of the character of the rocks beneath the surface, has two components, termed longitudinal and transverse. The former, which is the component in the direction of movement, is the faster of the two and is the one commonly observed.

"In addition the recording instruments may receive reflected waves from the upper surfaces of more elastic members of the deep-seated formations. The latter are apt to be locally intensified in certain localities, being dependent upon the angle of reflection from the deep-seated reflecting surface.

"Sound waves traveling through the atmosphere customarily also reach the recording instruments and may be used as a means of timing the explosion if the distance traveled is known or can be estimated. The speed of the air wave, of course, is much less than that of the earth wave."

Good Work Done in Prevention of Accidents in Oil Industry

I was a little astonished on reading the other day that there were 6 per cent more accidents in the oil industry in 1933 than there were in 1932. Don't most of the large oil companies employ experts in safety work? If they do, and I know some of them do, doesn't this increase in accidents last year look as though their efforts were not very effectual and that the oil companies were wasting money in hiring these so-called safety experts?—G. N. D.

Statistics at hand show that the accident frequency rate (not the number of accidents) increased about 6 per cent (5.9 per cent to be exact) during 1933 in the petroleum industry.

An answer to your question as to the merits of safety work is provided in the fact that the frequency of disabling injuries in the petroleum industry has declined 58 per cent since 1927, and notwithstanding the rise in frequency in 1933, as noted, reports from the National Safety Council indicate that all industries combined have had a 10 per cent increase in the frequency of injuries during 1933. Compared with the accident experience of all industries, the accident frequency of the petroleum industry for 1933 is more than 10 per cent better than that of all industries. In 1927 the frequency of accidents in the petroleum industry was 18 per cent worse than the average for all industry.

Had the frequency rate of 1927 prevailed among the reporting companies, 41,910 more injuries would have occurred than were reported. As the cost of disabling injuries in the petroleum industry averages approximately $300, the prevention of these 41,910 injuries reflect a saving of $12,573,000 in compensation, hospital, and medical costs. This figure does not take into consideration savings effected by the prevention of accidents which would have caused fires or damage to equipment, or injuries which would have caused no loss of time from the job.

Explanation of the increased accident frequency rate in 1933 is found in the fact that the industry in September of that year began operating under the oil code, bringing to thousands of jobs men who had been out of work for a long time or were entirely new to their positions. These men thus did not have the daily familiarity with their tasks which is an important factor in keeping accidents to a minimum.

Just to show how marked an improvement there was even in 1933 over the record of 1927, before systematic prevention of accidents was well under way in the oil industry, these figures, provided by Dr. W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, are quoted: In all departments of the industry, in 1933, one worker out of each group of 36 was injured, in comparison with 1927, when 1 worker in each group of 11 was injured. In the refining department the figures were 1 out of 45 in 1933 and 1 out of 24 in 1927; in production, 1 out of 22 in 1933 and 1 out of 6 in 1927; in pipe line work, 1 out of 31 in 1933 and 1 out of 6 in 1927.

You are right in your assumption that the large oil companies (and many of the smaller ones) employ safety engineers. They have found it to their distinct advantage to do so.

Early in 1927 the A.P.I. arranged with the National Safety Council to employ a safety engineer with oil-industry experience to act as secretary of the petroleum section of the council and to carry on an accident-prevention program for the industry. H. N. Blakeslee was employed for this post. January 1, 1931, the Institute created its own department of accident prevention, and Mr. Blakeslee became its director.

What Law of Equal Expectations Means in Production of Oil

I am trying to inform myself as much as possible about oil production by reading. A friend of mine who is production superintendent for a small oil company is generally able to explain anything that I don't understand, but he is unable to explain what the law of equal expectations is. I met a reference to this law in an article I was reading. May I ask you to tell me what it is?—F. M. O.

In a study of the general principles underlying the production of oil wells, Carl H. Beal and J. O. Lewis, of the U. S. Bureau of Mines, worked out this law of equal expectations. Their own statement of the law follows: "If two wells under similar conditions produce equal amounts during any given year, the amounts they will produce thereafter, on the average, will be approximately equal, regardless of their relative ages."

Let it be supposed by way of illustration that a certain well has been producing for two years when an offset well is completed. This offset well in its first year and the original well in its third year each produce 100,000 bbls. of oil. Under the operation of the law of equal expectations it would be calculated that from this point on the two wells will produce equal quantities of oil, regardless of the fact that one is three years old and the other only one year old.

The application of this law would be influenced, however, by the method used in producing the two wells. If, for example, one were produced by pumping and the other by gas lift, the ultimate recovery of the two would not be the same, even though their production records for the one year were alike.

It is of interest to note that Mr. Beal and Mr. Lewis reached the conclusion embodied in this law of equal expectations by independent investigation. Mr. Beal arrived at his by comparing the rates of decline of wells of differing output. Mr. Lewis came to the same conclusion by comparing the quantities of oil which wells of equal output would produce ultimately without regard to their ages.

The law first was based on wells in certain Oklahoma districts only, but following the investigations of the two coworkers examination of records from fields in various parts of the country has demonstrated that the law is of general application.

Why Was It Called That?

PILE

The word "pile" has come to be a familiar one in tideland oil fields, such as some in California, and in areas like those in parts of the Gulf Coast where swampy conditions prevail and where sometimes wells are drilled in the middle of lakes. In such regions the pile and the pile-driver have played a part in the difficult problem of constructing derrick foundations. The word is derived from the Latin "pilum," and to the ancient Roman it meant the heavy javelin carried by a foot soldier. A fourteenth century poem, "Testament of Love," provided a curious setting for a sound engineering opinion expressed there, "If the piles ben trew, the gravel and sand wol abyde."

PERSONAL PARAGRAPHS

JOHN FITTS, consulting geologist, Ada, Okla., is making his field headquarters in Sulphur, Okla., for a time.

* * *

ROBERT FOTHERGILL, of Fothergill & Quantrell, Mount Pleasant, Mich., returned recently from a vacation trip to Bermuda.

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GEORGE GIFFERT, SR., Greendale Township Midland County, Michigan, returned recently from a three-week business trip to Tulsa.

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G. W. LICHTENBERGER and F. H. POWELL were elected president and vice president, respectively, of the Rice Ranch Oil Company at the annual election held last week.

* * *

C. E. OLMSTED was re-elected president at the annual meeting of the Texas Company, and J. A. BERMINGHAM, R. T. HERNDON, L. R. HOLMES and H. W. DODGE were elected vice presidents.

* * *

WALTER F. VANE, manager of the land department for the Standard Oil Company of California, San Francisco, has returned to his headquarters after a week's business trip to Texas.

* * *

R. E. ALLEN, assistant oil umpire for California has returned to Los Angeles from Washington, D. C., where he was a member of a special committee appointed by ADMINISTRATOR ICKES to survey the effect of the petroleum code.

* * *

D'ARCY CASHIN, consulting geologist, Houston, Tex., has returned from a visit to points in Missouri.

* * *

O. C. HARPER, independent operator of Midland, Tex., was a business visitor to Houston, Tex., the past week.

* * *

IRA CORN, of Long Beach, Calif., spent last week with his brother. ELMER CORN, president of the Plains Oil Company, of Wichita, Kans.

* * *

HENRY CORTES, chief geophysicist of the Magnolia Petroleum Company, Houston, Tex., was a business visitor in Dallas, Tex., during the week.

* * *

A. I. LEVORSEN, chief geologist for the Tide Water Oil Company at Houston, Tex., has returned to his desk, after a trip through the Mid-Continent area.

* * *

STEWART GIRAUD, manager of the sales department for Humble Oil & Refining Company, at Houston, Tex., left for an extended business trip to the East.

* * *

J. E. OWEN, production engineer in the Healdton district of southern Oklahoma for Shell Petroleum Corporation, has been transferred to the Mid-Continent headquarters at Tulsa.

* * *

CARL W. DILLON, field service engineer for National Tube Company, formerly located at Gary, Ind., is now chief inspector for Oklahoma and Kansas, with headquarters in Tulsa.

* * *

GEORGE R. BRINKLEY, geologist, who has been stationed in Caripito, Venezuela, for the Standard Oil Company, has returned to the United States, and has located at Amarillo Tex., where he is doing consulting geological work.

W. A. DELANEY, of Ada, Okla., one of the leading operators in the Fitts Pool, left last week for Chicago, Ill., on a business mission.

* * *

A. W. HUNTER, in charge of the Mar Jon-Max mont drilling operations on the Watson structure west of Lundbreck, Alberta, visited Calgary recently.

* * *

FRANK L. MAIR, president of the Lima Oil Company, of Lima, Ohio, and head of the Lima Oil Corporation, of Muskegon, Mich., visited the company's properties in the Muskegon Field.

* * *

DON STEWART, formerly of Garrison, Pa., who was seriously injured when some heavy equipment on a drilling well fell on his head fracturing his skull, is in a critical condition in Mount Pleasant Mich.

* * *

J. C. MacQUIDDY, manager of the Standard Oil Company, at San Pedro, Calif., is convalescing at his home from a heart attack seizure a week ago and expects to return to duty within the next 15 days.

* * *

MR. and MRS. J. W. McINTOSH, of Mount Pleasant, Mich., returned to their home recently from Saegertown, Pa., where they visited Mr. McIntosh's mother. Their return was delayed by the death of Mr. McIntosh's aunt, MRS. MARGARET STEAD, also visiting in Saegertown.

EUGENE McDERMOTT, vice president of the Geophysical Service, Inc., Dallas, Tex., has returned from a vacation trip to California.

* * *

T. B. WIRTH was transferred from the engineering service department of A. M. Byers Company, Pittsburgh, Pa., to the Houston, Tex., office of the company on February 1.

* * *

HAROLD C. RALPH and D. M. CHRISTIE, of Vancouver, British Columbia, visited Calgary recently in connection with prospective oil development in southern Alberta.

* * *

R. W. SIMPSON, SR., accompanied by his wife and S. C. BOSWELL, all of Ada, Okla., are now making a trip through the West Indies and Panama Canal Zone, and will be away from their home about a month.

* * *

R. H. MORRISON, manager of the southern division for the California Company, Dallas, Tex., has returned from a month's business trip to the Standard Oil Company of California's main offices at San Francisco, Calif.

* * *

JAMES A. MOFFETT, Federal Housing Administrator, and former vice president of the Standard Oil Company of New Jersey and subsequently holding a similar position with the Standard Oil Company of California, arrived in Los Angeles, Calif., in the interest of stimulating housing activities.

* * *

FRANK LONG, Houston, Tex., drilling contractor, spent several days in San Antonio, Tex., the past week.

* * *

B. A. HARDIE, independent operator and drilling contractor, of Shreveport, La., spent several days in Houston, Tex., last week.

* * *

GEORGE A. HILL, JR., president of the Houston Oil Company at Houston, Tex., has returned from a business trip to St. Louis, Mo.

* * *

B. H. MURPHY, assistant engineer, U. S. Geological Survey, has been transferred from the Oklahoma City, Okla., office to the Tulsa office of the survey.

* * *

J. W. DUCKETT, superintendent of refineries for Sinclair Refining Company at New York, visited the company offices at Houston, Tex., the past week.

* * *

W. W. KEMPER, in the accounting department for Mills-Bennett Production Company at Houston, Tex., has returned to his desk, after an illness of several weeks.

* * *

HOWARD VAN ZANDT, formerly deputy supervisor for the Texas Railroad Commission at Conroe, Tex., has been transferred to the Houston office, where he will do special work.

* * *

S. P. BROWN, vice president and in charge of sales for the Hughes Tool Company at Houston, Tex., is on an extended business trip to the East. He was accompanied by his wife.

* * *

CHARLES O. and ROBERT FAIRBANK and DR. A. P. MacCALLUM have returned to Petrolia, Ontario, from Morro Bay, Calif., where they visited MR. and MRS. LEO RANNEY.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

February 5, 1910

F. A. Innes, map maker, Nowata, Okla., has a two-page advertisement in The Oil and Gas Journal. He has maps of every Mid-Continent oil field.

F. P. Dodge will have charge of the construction work of the Texas Co.'s West Tulsa refinery. Mr. Dodge and R. C. Holmes, manager of the company's refinery division, are in Tulsa looking over the site and making preliminary arrangements.

George Harmon, of Tulsa, brings in a well 9 miles from Boulder, Colo. It is a 50-bbl. well and the oil will sell for $1.50 per barrel.

20 Years Ago

February 4, 1915

Among the visitors in Tulsa this week are Charles O'Day, New York; John W. Campbell, Warren, Pa.; F. E. Harrington, Sistersville, W. Va.; F. M. Aiken, New York; Calvin N. Payne, Titusville, Pa.; S. A. Lane and T. S. Harrison, Cody, Wyo.; J. D. Lemex, Houston, Tex.; John M. Crawford and G. E. Work, Parkersburg, W. Va.; Will McVay, Bradford, Pa.; William McKinley, Olean, N. Y.; and L. E. Aaronson, New York.

R. S. Gray, of the Prairie Oil & Gas Co.'s land department, has purchased more than $20,000,000 worth of productive leases since he joined the company.

Dana H. Kelsey has joined the Prairie Oil & Gas Co. and will head the land department, with headquarters in Tulsa.

The Benedum & Trees interests have purchased the entire holdings of the Atlas Oil Co. in the Caddo, Red River and DeSoto Pools in Louisiana.

The deep sand district in the Humble Field, Texas, is showing wells from 5,000 to 14,000 bbls. in initial production.

10 Years Ago

February 5, 1925

Of the 720,731,222 bbls. of crude oil produced in the United States in 1924, 38 per cent was below 28 degrees in gravity; 19.7 per cent 36 degrees, and 8.6 per cent 40 degrees and over.

Donald F. McDonald has been made chief geologist in the Rocky Mountain district by the Sinclair interests. His headquarters will be in Casper, Wyo.

R. A. Cattell is the newly appointed superintendent of the Bartlesville experiment station of the U. S. Bureau of Mines.

James H. Kuhns, for 50 years in the production end of the oil industry, dies in Tulsa.

Gale Gray, field man for the Jarecki Manufacturing Co. in the Okmulgee district, dies in Tulsa.

E. A. SHOWERS, of Showers & Moncrief, with headquarters at Houston, Tex., was a business visitor to Fort Worth, Tex., the past week.

* * *

G. R. HENSON, oil operator of Houston, Tex., and formerly chief exploration engineer of Shell Petroleum Corporation, is a visitor in Tulsa.

* * *

H. C. ARNOLD, a geologist for Barnsdall Oil Company, has resigned to join the geological staff of British American Oil Producing Company, in Tulsa.

* * *

WINSTON T. SMITH, president of the Quality Oil Company of Paragould, Ark., once an active operator in the Oklahoma fields, was a visitor in Tulsa last week.

* * *

EMIL R. ALBERT, for nine years in charge of the natural gas division of the Cities Service Gas Company, has resigned and is resuming the practice of law in Tulsa.

* * *

FRANK BRAMAN, manager in Tulsa for the National Tube Company, and MRS. BRAMAN have returned from a trip to Elyria, Ohio, occasioned by the death of a sister of Mr. Braman.

* * *

JACK RYAN, who has been office assistant to PAUL L. LYONS, chief scout of Stanolind Oil & Gas Company, Tulsa, has been made scout for western Kansas and assigned to the Great Bend territory.

* * *

G. E. THOMPSON, general chairman of the committee on state and local taxation of the Mid-Continent Oil and Gas Association, Tulsa, was in Dallas, Tex., during the week, discussing tax and other matters with Texas oil men.

* * *

Meant To Study Law But Switched

Dr. Robert B. Newcombe, assistant state geologist of Michigan, took up the study of geology through the influence of Dr. Larry M. Gould, associated with Admiral Richard E. Byrd on the latter's antarctic expedition.

DR. R. B. NEWCOMBE

Entering college at the close of the World War with the intention of studying law, he switched to chemistry and later to geology. He has attained a position of prominence since the discovery of the Muskegon Field in 1927 when he was placed in charge of the oil and gas division of the State Geological Survey.

A year as junior geologist with the East Ohio Gas Company immediately following his graduation from the University of Michigan with a Bachelor of Science degree in 1923 had much to do with Doctor Newcombe's decision to specialize in petroleum geology.

He returned to the University of Michigan, held a scholarship in geology at Cornell University for a year and was assistant instructor in geology at Ann Arbor for a year before being placed in charge of petroleum geology for the State in June, 1927. He earned the degree of doctor of philosophy in 1931 with a thesis on the "Oil and Gas Fields of Michigan." He has written important papers on Michigan and midwestern geology.

Dcotor Newcombe is a member of the American Association of Petroleum Geologists, of the Michigan Well Drillers Association and was vice president of the Michigan Academy of Science, Arts and Letters in 1931-32. He was born July 14, 1901, in Havana, Cuba, and now lives in East Lansing. He is a member of Sigma Xi, Sigma Gamma Epsilon and Pi Kappa Alpha. His principal hoppy is travel.

IVAN HOWARD has returned from a trip to Roosevelt County, eastern New Mexico.

* * *

R. T. LYON, vice president in charge of land and geology of Skelly Oil Company, has returned from a tour of the Gulf Coast, West Texas and New Mexico territories.

* * *

W. A. SCHLUETER, of the Refinery Supply Company, plans to leave for Mexico City, Mexico, February 2 for a three weeks' visit, accompanied by MRS. SCHLUETER. They will drive to Monterey.

* * *

ROBERT MITCHELL, of the executive department, Shell Petroleum Corporation, St. Louis, Mo., was in Tulsa last week. He has been making a survey of the company's gasoline plants in Oklahoma.

* * *

V. W. BAILEY, with Taubman Supply Corporation, has been made chairman of the program committee of the Purchasing Agents Association of Tulsa for 1935. He succeeds HAROLD B. WARD, of H. F. Wilcox Oil & Gas Company.

* * *

R. B. PRINGLE, vice president of Tide Water Oil Company, with headquarters at Tulsa, visited the company's office at Houston, Tex., the past week and then made an inspection tour of the company's properties on the Gulf Coast and East Texas.

* * *

S. E. SLIPPER, chief geologist of the Canadian Western Natural Gas, Light, Heat & Power Company, of Calgary, Alberta, recently addressed the Lethbridge, Alberta, branch of the Engineering Institute of Canada, on "The Development of the Turner Valley Oil Fields."

* * *

LYLE DAY has resigned from the Phillips Petroleum Company staff at Bartlesville, Okla., to join the Gulf Production Company at Wickett, in West Texas.

* * *

A. W. BREELAND, safety supervisor for the Lone Star Gas System, Dallas, Tex., has been appointed a member of the Texas State Committee of the Federal Training program.

* * *

DR. RUD BROUCHLI, geologist for the Anderson-Prichard Oil Corporation, Oklahoma City, Okla., addressed the Fort Worth (Tex.) Geological Society at its luncheon in the latter city.

* * *

J. P. RONEY, chief of the marine department of the Texas Company, arrived in Los Angeles, Calif., from New York a week or so ago to supervise repair work on the company's tanker Australia.

* * *

JESSEL S. WHYTE, vice president and general manager of Macwhyte Company, Kenosha, Wis., was recently elected to the board of governors of the National Aeronautic Association. Mr. Whyte is now governor from Wisconsin.

* * *

JAMES A. JARBOE, assistant pipe line foreman at Ranger, Tex., for the Lone Star Gas Company, has been elected vice president of the Oil Belt Reserve Officers' Association for the ensuing year. Mr. Jarboe is a first lieutenant in the engineers.

* * *

SIM O'NEAL, formerly with the State Railroad Commission at Kilgore, Tex., has been appointed as supervisor for the Houston area for the commission. He will spend a few days at his home in Lubbock before taking up his new work.

* * *

PRIMO VILLA MICHEL, former minister of national economy, has been appointed general manager of the Compania de Petroleos de Mexico, S. A. (Petromex), the semiofficial enterprise the federal government organized to engage in all branches of the petroleum industry.

C. A. CALDWELL, credit manager of the Dallas Gas Company, has been elected second vice president of the Retail Credit Men's Association for 1935.

* * *

WILLIAM J. HEALEY, prominent Pennsylvania oil producer, and MRS. HEALEY, celebrated their twenty-sixth wedding anniversary recently at their home in Bradford, Pa.

* * *

C. A. PETERSON, advertising director of Pure Oil Company, is starting an air tour of the principal cities in the states where the company is active. The trip will be made in one of the three Pure Oil Company planes.

* * *

DR. E. FRANKLIN ARMSTRONG, J.P., LL.D., F.R.S., director of Herbert Green & Company, Ltd., is visiting the United States in connection with the development of the Duo-Sol lubricating oil manufactory being erected in England.

* * *

J. W. RETTIG, in charge of the land department, and C. L. MOHR of the geological department, of the Indian Territory Illuminating Oil Company's West Texas and New Mexico division, have been transferred from San Antonio to Midland, Tex.

* * *

H. C. CORNFORTH, chairman and managing director of Vacuum Oil Company Proprietary, Ltd., Socony-Vacuum subsidiary in Australia, has retired after many years' service with the group. Other retirements included ERNST MICHAELSON, executive of Socony-Vacuum's European organization.

* * *

P. H. BOHART has been made vice president of the Gypsy Oil Company and Gulf Pipe Line Company of Oklahoma, with headquarters in Tulsa. Mr. Bohart, for several months, has been assistant vice president of the companies named. He is a graduate of the Rolla School of Mines and has been in the service of the Gulf Oil Corporation for years, much of the time in the Mexican fields where he made an excellent record for efficiency.

J. WHITNEY LEWIS, consulting geologist of Cisco, Tex., has returned from an extensive tour of Cuba and South America.

* * *

L. M. BUSSERT has been appointed secretary of the regional committee for the sixth district of the Planning and Coordination Committee.

* * *

MR. and MRS. T. W. RHOADS have just returned to Fort Worth, Tex., from an airplane trip to Tulsa and Coffeyville, Kans. Mr. Rhoads is assistant superintendent of the Gulf Production Company.

* * *

DONALD RYAN, of the scouting department of the Stanolind Crude Oil Purchasing Company in Tulsa, has been transferred to field work and will scout western Kansas, with headquarters in Great Bend, Kans.

* * *

DR. R. B. NEWCOMBE, petroleum geologist and assistant state geologist of Michigan, was elected a fellow of the Geological Society of America at the recent annual meeting in Rochester, N. Y. He has been assistant to STATE GEOLOGIST R. A. SMITH, for eight years.

* * *

PALMER LANDON, former sheriff of Isabella County, Central Michigan, has been appointed state oil inspector, succeeding JACK McCLAIN. Mr. Landon formerly served as a special officer with the State Conservation Department. He is under the state police in his new position.

* * *

ARTHUR D. LITTLE retired as president and was elected chairman of the board at the annual meeting of the stockholders and directors of Arthur D. Little, Inc., chemists and engineers, Cambridge, Mass. EARL P. STEVENSON, who has been with the organization since 1919 and vice president since 1922, was elected president, and ROGER C. GRIFFIN, a member of the staff since 1909, was elected treasurer. RAYMOND STEVENS continues as vice president.

MARKET RECORD OF OIL SECURITIES

Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1935 High	1935 Low	Week ended February 2 Sales	Week ended February 2 High	Week ended February 2 Low	Week ended February 2 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1934	1934 High	1934 Low	1933 High	1933 Low
56¾	48½	5,800	56¾	52½	56¼	Amerada Corp.	774,875	N.P.	50cQ	1-31-35	$2.00	55⅝	39	47⅝	18½
25⅝	23¾	6,400	24¾	24⅛	24½	Atlantic Refining	2,673,834	$25	25cQ	12-15-34	1.00	35¼	21½	32½	12⅝
7	6⅛	2,600	6¼	6⅛	6¼	Barnsdall Corp. A	2,248,795	$5	....	5-11-31	....	10	5⅞	11	3
7⅜	6½	7,700	7	6⅝	6⅞	Columbia Gas & Elec.	11,610,036	N.P.	....	5-15-34	‡ .25	19¼	6⅝	28⅛	9
8¾	7½	17,400	7¾	7½	7⅝	Consolidated Oil Corp.	14,218,835	N.P.	14c	10-31-34	.42	14¼	7¼	15¾	5
19⅛	16¾	9,200	17⅞	17¼	17⅝	Continental Oil of Delaware	4,738,593	$5	25c	10-31-34	.50	22¾	15¾	19⅝	4⅞
18⅞	15⅜	2,600	16⅝	15⅜	15⅜	General Asphalt	387,149	$10	....	6-15-32	....	23½	12	27	4⅝
3⅜	2¾	1,100	2¾	2¾	2¾	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	5⅝	2½	7⅜	1⅞
1⅞	1	300	1¼	1	1	Louisiana Oil Refining	1,802,158	N.P.	....	.....	....	3⅜	¾	4	⅝
12⅞	11	3,500	12	11	11⅛	Mid-Continent Petroleum	1,857,912	$10	25c	11-15-34	.50	14¾	9⅛	16	3¾
14⅝	12	200	12	12	12	National Supply of Delaware	382,591	$25	....	5-15-31	....	21⅛	10	28⅝	4
10⅞	9⅝	6,000	10⅛	9⅝	9⅞	Ohio Oil Co.	6,563,107	N.P.	15c	12-15-34	.45	15⅞	8½	17⅝	4¾
8½	7	1,100	7⅞	7½	7⅞	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.40	9⅜	5½	9½	3
1⅜	⅞	100	⅞	⅞	⅞	Panhandle P. & R.	198,770	N.P.	....	.....	....	2½	⅝	4¼	⅜
16	14¼	7,500	15⅝	14⅜	15¼	Phillips Petroleum	4,154,687	N.P.	25c	3-1-35	1.00	20¾	13⅜	18¾	4¾
8⅜	7¼	3,600	8	7¼	7¼	Plymouth Oil Co.	1,014,082	$5	4% Stk.	12-22-34	75c & 4% Stk.	16¾	7¼	17⅝	6¾
7⅜	6⅝	3,400	7	6⅝	6⅜	Pure Oil	3,038,370	N.P.	....	9-1-30	....	14⅞	6⅛	15⅜	2½
32⅜	29¾	700	32	31½	32	Royal Dutch N. Y. shares	432,224	$14	$1.35	7-31-34	1.35	39⅛	28⅝	39¾	17⅝
26⅞	21	1,700	23¼	22½	23	Seaboard Oil of Delaware	1,204,460	N.P.	15cQ†	12-15-34	1.00	38⅜	20¾	43⅜	15
7⅞	6⅝	10,400	7¼	6⅞	7	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	11½	6	11⅝	4
78¾	68¾	900	75	73	73	Shell Union Oil pfd.	400,000	$100	....	7-1-31	....	89	57	61	28½
18¾	15⅛	5,500	16½	15⅛	15⅜	Simms Petroleum	461,698	$10	50c	2-1-35	.55	17⅛	7¼	12⅜	1⅞
7⅝	6½	1,400	7⅝	7¼	7½	Skelly Oil	1,008,514	$25	....	12-15-30	....	11½	6	9⅞	3
14⅞	13⅝	24,600	14¼	13¾	14⅛	Socony-Vacuum	31,019,694	$25	15cQ	12-15-34	.60	19⅞	12½	17	6
32⅜	29¾	7,600	30⅝	29¾	30	Standard Oil of California	13,102,900	N.P.	25c	12-15-34	1.00	42⅞	26½	45	19½
25½	24	15,300	24⅞	24	24⅛	Standard Oil (Indiana)	15,941,894	$25	25cQ	12-15-34	1.00	32¾	23¼	34	17
30⅛	30	200	30	30	30	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	2.00	41	26	39⅞	12¾
43½	40	17,100	41¾	40	40¼	Standard Oil of New Jersey	25,740,065	$25	50cSA†	12-15-34	1.25	50⅛	39¼	47½	22¾
67½	65	500	67⅛	66	67⅛	Sun Oil	1,733,013	N.P.	25cQ	3-15-35	$1 & 9% Stk.	74¼	51½	59	35
21⅝	19½	7,200	20	19½	19⅞	Texas Corp.	9,486,417	$25	25cQ	1-1-35	1.00	29⅜	19⅝	30⅛	10¾
4¼	3¼	2,600	4	3¾	3⅞	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	....	6½	2½	6½	1⅝
10	8⅜	5,400	8⅜	8⅜	8½	Tide Water Associated	5,618,672	N.P.	....	2-16-31	....	14⅜	8	11⅜	3⅛
87½	84	700	85¾	84½	84½	Tide Water Associated pfd.	666,524	$100	$2.	12-22-34	$8.50	87	64½	65¼	23½
16⅜	14⅞	2,000	15¼	14⅞	15	Union Oil of California	4,386,070	$25	25cQ	2-9-35	1.00	20½	11½	23⅜	8½
26⅛	24½	1,600	25⅝	24½	25	Union Tank Car	1,200,000	N.P.	30cQ	12-1-34	1.20	25¾	15⅝	22¾	10½
2⅝	2¼	1,900	2½	2¼	2¼	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	5¾	2	5½	2

*Ex-dividend. †Plus extras. ‡Payable in preferred stock. §On account of accumulated dividends.

Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1935 High	1935 Low	Week ended February 2 Sales	Week ended February 2 High	Week ended February 2 Low	Week ended February 2 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1934	1934 High	1934 Low	1933 High	1933 Low
33	30½	50	31½	31½	31½	Buckeye Pipe Line Co.	200,000	050	75cQ	3-15-35	$3.00	38	26	39¾	25
2⅜	1¾	1,100	1⅞	1¾	1¾	Carib Syndicate	799,020	25c	....	.....	....	5½	1½	7¾	⅛
147½	140	50	145	145	145	Chesebrough Mfg. Co.	120,000	$25	$1Q†	12-28-34	11.50	150	116	129	71
1½	1¼	17,100	1⅜	1¼	1⅜	Cities Service	37,804,394	N.P.	....	6-1-32	....	4¼	1¼	6¼	1½
⅛	⅛	500	⅞	⅝	⅞	Colon Oil	2,200,000	N.P.	....	.....	....	3¼	½	4	¼
⅞	⅝	200	⅞	⅝	¾	Cosden Oil	399,687	$1	....	.....	....	3⅞	½	3⅞	1⅝
13⅜	11⅞	4,000	12	11⅝	12	Creole Petroleum	6,974,356	$5	....	.....	....	14⅜	9⅝	12	4¾
4⅞	4½	100	4½	4½	4½	Darby Petroleum	509,696	$5	25c	1-25-35	.50	7½	4⅛	8	2⅛
1⅛	⅞	No sales ..	..	..	..	Derby Oil & Refining	263,162	N.P.	....	.....	....	2¼	1	2¾	⅞
34	34	No sales ..	..	..	..	Eureka Pipe Line	50,000	$50	$1Q.	2-1-35	4.00	37	30	41¾	20
60⅞	55⅝	2,400	57½	56	56⅜	Gulf Oil Corp.	4,538,101	$25	....	10-1-31	....	76¾	49¾	62	24
48⅛	44	5,800	46⅝	45	45⅞	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	1-2-35	$1.25	49½	33¼	105½	40
17⅛	16⅜	8,300	16⅝	16⅜	16⅜	Imperial Oil of Canada	26,857,152	N.P.	25cSA†‡	12-1-34	.92½	17⅜	12⅝	15⅞	6½
4⅛	3¾	100	4	4	4	Indiana Pipe Line	300,000	$10	15cSA†	11-15-34	.35	6⅞	3⅝	8	3½
31⅜	28⅞	7,500	30⅛	29¼	29¼	International Petroleum	14,247,088	N.P.	56cSA†‡	12-1-34	2.28	33⅜	19⅜	23½	8⅞
5	4⅜	10,500	5	4⅜	4⅞	Louisiana Land & Exp.	3,000,000	N.P.	....	.....	....	5	2⅛	2¼	⅛
4⅜	3¾	200	4	3¾	4	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	6	3⅜	9½	1¼
6¼	5¼	1,000	5¾	5⅝	5⅝	Lone Star Gas	5,382,723	N.P.	15c	2-15-35	‖ .16	8⅜	4¼	11⅞	4¾
4⅝	4⅛	800	4⅜	4⅛	4⅛	Mountain Producers	1,682,182	$10	15cQ	1-2-35	.60	5½	4	6½	2¼
13⅝	13	1,100	13½	13⅜	13½	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-34	1.00	18½	13⅛	20	10
7¾	7¼	500	7⅛	7	7⅛	National Transit	509,000	$12.50	35cSA	12-15-34	.75	9½	7	10	5½
2⅝	2⅛	200	2⅛	2⅛	2⅛	New Bradford Oil	1,445,202	$5	10cSA	3-15-35	.20	2½	1¾	2⅛	½
2⅛	1⅝	200	1¾	1¾	1¾	New Mexico and Arizona	1,000,000	$1	....	.....	....	2¾	1	1⅞	⅛
3½	3¼	No sales ..	..	..	..	New York Transit	100,000	$5	15cSA	10-15-34	.30	4¾	3	4⅞	..
5½	5¼	No sales ..	..	..	..	Northern Pipe Line	120,000	$10	25cSA	1-2-35	.50	7	4⅝	6⅛	4¼
2⅛	1½	300	1⅝	1½	1⅝	Pantepec Oil	1,608,700	N.P.	....	.....	....	2⅝	⅞	3¾	⅛
1¾	1⅜	400	1¾	1¾	1¾	Ryan Consolidated	296,931	N.P.	....	.....	....	3⅜	⅞	4¼	⅝
6¼	5¾	1,000	5⅞	5¾	5⅞	Salt Creek Producers	1,496,859	$10	20cQ	2- 1-35	.80	7⅞	5½	9¼	3½
23¾	22½	600	23	22½	22½	South Penn Oil	1,200,000	$25	30cQ	12-31-34	1.20	26½	17½	22⅛	11
3⅞	3⅞	No sales ..	..	..	..	Southern Pipe Line	100,000	$10	15cSA	9-1-34	.25	5½	3½	6	2⅜
50	50	No sales ..	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	12-31-34	5.00	47	41	43	24½
21½	18	5,900	20	19¾	19¾	Standard Oil of Kentucky	2,606,983	$10	25cQ†	12-15-34	1.50	18⅜	14⅝	19¼	8⅝
9	8½	200	9	9	9	Standard Oil of Nebraska	190,822	$25	....	6-20-34	.50	16⅞	8¼	20½	11
16¼	13	1,700	15	14	14⅛	Standard Oil of Ohio	753,740	$25	....	1-3-33	....	28½	12¼	41	15½
1¼	1	1,200	1⅛	1	1⅛	Sunray Oil	1,610,810	$1	....	4-15-31	....	2	⅛	1½	¼
6⅞	5¾	800	6	5⅞	6	Texon Oil & Land	936,028	N.P.	15cQ†	12-29-34	.90	11	4⅜	13¾	6¼

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Includes 50 cents on old $25 par value stock. ‖Payable in preferred stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Tankcar Prices Soften in Chicago Area and the Market Future Is Uncertain

By SPECIAL CORRESPONDENT

CHICAGO, Feb. 2.—A slow, gradual softening of tank car prices on gasoline and certain other products has occurred in the last few days, along with some slight indication of easing in the tank wagon and service station gasoline structure. In fact, the move of Standard Oil Co. (Indiana) in reducing territorial tank wagon and service station prices three-tenths cent a gallon February 2 was an indication that these resale markets were reflecting the tank car.

The future trend of prices continues just about as indecisive and beclouded as it has been at any time in recent months, with some tending to the belief, however, that a fairly stable and settled condition may be at hand. Jobbers have continued to be extremely reticent about making any commitments other than those which have been absolutely necessary. Moreover, in view of their well-protected needs under contract arrangements in many cases, together with the seasonally reduced demand, the spot market buying has been extremely slack.

Offers Scattered

The offers that have been coming out have been of a scattered nature and it is difficult to characterize them with one or two words. It is not exactly correct to define all the offerings of gasoline in the last few days as having been of a distress nature, but quite a bit of the material offered has been such that it might approach that classification. Scattered cases of needs of funds on the part of refiners, and of the pushing out of material by carlot marketers have combined to continue the nervousness noted for some time.

The sustained interest in the subject of new models of motor cars, bolstered by the fact that actual sales of cars both at shows and through retail dealers is counted upon to help produce that volume of motor car registration and gasoline consumption that many authorities in the oil industry have forecast for the spring and summer consuming season. With this in mind, the trade in the central states is preparing for a good year from the standpoint of volume. Movement of cars on streets has been fairly good even through the bad weather. Gallonage of course has suffered as it always does at this time of year.

Consider Support

Much discussion is going on in major company quarters in this region of the advisability of a new alignment which will permit large-scale support of the market on a more steady and official basis than has been the case recently. Some of the recent support buyers, it has been stated, have turned loose of a certain amount of the material they bought. Certain observers favor an arrangement with a more or less binding understanding and for this reason favor submitting still another agreement form to Washington.

It is a question whether in this market, even sharp further tank car price reductions would stimulate jobber buying—the thing which admittedly this market needs badly. Jobbers are known to be sliding by with extremely low stocks and from their statements they expect to continue such policy for some time to come. However, their margins are still much better individually than they were last fall.

Kerosene

Kerosene by maintaining a relatively strong price position apparently is indicating that the trade is thinking more and more of the late winter consumption of kerosene, especially in terms of the relatively strong current kerosene stock situation. Relatively few offers are com-

(Continued on Page 86)

Crude Oil Prices

(Continued from Page 27)

Humble Oil & Refining Co. and Texas Co. Effective September 20 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Iles, light (Sept. 29, 1933)	$.96
Iles, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 29, 1933)	
See Stanolind Mid-Continent price schedule	
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Sept. 29, 1933)	.62
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Lance Creek (Dec. 16, 1932)	.92
Hudson (June 3, 1931)	.65
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome:	
Below 18° (July 1, 1934)	.52
18° and above (July 1, 1934)	.62
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera (Sept. 29, 1933)	1.25
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co. Pondera, Mont., by Ohio Oil Co. (Stanolind Oil & Gas Co., effective January 1, 1935, posted $1 per barrel in Pondera.)

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Tullos, Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.03
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Nov. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.03
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark. (Mar. 17, 1934)	1.03
Stephens, Ark. (Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.60
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urbana posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co. Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective Feb. 4, 1935)

Bradford, Pa.	$2.35
Allegany, N. Y.	2.35

SOUTH PENN OIL CO.
(Effective Feb. 4, 1935)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.35
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.02
Pennsylvania Grade Oil in Eureka Pipe Line lines	1.97
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.87
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.37

PENNZOIL CO.
(Effective Feb. 4, 1935)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	$2.27
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.26
Includes Titusville district.	
Group C	2.25
Includes Turkey and Tidioute districts.	
Group D	2.24
Includes Bear Creek and Porkey districts.	
Group E	2.21
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacey and Kinzua districts. Price depends on length of pipe line haul to plant at Oil City.	

PURE OIL CO.
(Effective Jan. 4, 1935)

Cabin Creek, W. Va.	$1.82
Bradford Hollow, W. Va.	1.82
Kelly Creek, W. Va.	1.77

CREW-LEVICK CO.
(Effective Jan. 4, 1935)

Oil City-Titusville	2.13

Middle Western States

OHIO OIL CO.

Lima (Feb. 1, 1935)	$1.15
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky (May 26, 1934)	1.08
Midland, Mich. (Sept. 30, 1933)*	1.02
West Branch, Mich.	.86
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.23

*Posted by Pure Oil Co. and Simrall Pipe Line Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted prices. West Branch, Mich., posted by Simrall Pipe Line Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	$2.56
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.50

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Mexico

Panuco*	$1.00

*F.o.b. ship, based on November transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote Hills	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.65	$.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.66	.65	.65	....	.65	....	....	....	.65
16-16.9	.66	.65	.72	.73	.69	.73	....	.69	.67	.68	.65	....	.65	....	....	....	.65
17-17.9	.69	.65	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.83	.89	.92	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	....	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	....	1.04	1.04	.93	.98	1.04	....	.89	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.06
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.12	1.09	....	....	1.12
32-32.9	....	....	....	....	....	....	1.15	....	....	....	....	1.12	1.15	1.13	....	....	1.15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	....	1.18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standard Oil Quotations

Mountain View—Effective July 3, 1934, the following are the prices of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field: 14 to 19.9 degrees, 57 cents; 20-20.9, 58 cents; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 63 cents; 24-24.9, 66 cents; 25-25.9, 69 cents; 26-26.9, 72 cents; 27-27.9, 75 cents, 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 degrees and above, 93 cents.

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon and Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchases, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33--33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 36 degrees and over; Coyote Hills, 22 degrees and over; Richfield, 25 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 12.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.

Kansas Wildcats

(Continued from Page 64)

Gypsy Oil Co.'s No. 1 Keesling, NW NW SW Sec. 10-20-9w.
Building rig.

Johnson & Carey et al's No. 1 Dyck, SE NE SE Sec. 35-23-5w.
Base of Mississippi lime 3,170 ft.; drlg. 3,946 ft.

Lario O. & G. Co. et al's No. 1 Schreg, NW SE SW Sec. 23-19-4w.
Chat 3,250 ft.; drlg.; 3,255 ft.

Langston et al's No. 1 Markle, NE SW Sec. 1-20-9w.
Drlg. 2,989 ft.

Marathon Oil Co.'s No. 1 Grove, SE NE NW Sec. 29-19-9w.
Location.

Vickers Pet. Co. et al's No. 1 Gouldner, SE NE NW Sec. 16-18-9w.
Building rig.

Yingling et al's No. 1 Maupin, NW SW SW Sec. 1-18-8w.
Viola 3,233-39 ft.; pumped 104 bbls. oil, 3 bbls. wtr. in 24 hrs.; acidized and pumped 60 bbls. oil with show wtr.; to deepen.

BROOKS COUNTY

Stearns & Streeter's No. 1 Meyers, NE NW NW Sec. 34-9-16w.
Oswald 3,084 ft.; S.D. 3,088 ft.

RUSH COUNTY

Lario O. & G. Co. and Phillips Pet. Co.'s No. 1 Benbow, NW NE NE Sec. 12-17-19w.
T.D. 3,186 ft.; fishing.

RUSSELL COUNTY

J. Brousk and R. D. Bailey's No. 1 Kluesner, NW SE Sec. 34-15-12w.
Rig.

Blair et al's No. 1 Fink, SW NW SE Sec. 16-14-14w.
Oswald 3,055 ft.; acidized at 3,154 ft. and pumped 320 bbls. oil; 6-in. 3,246 ft.; granite wash 3,318 ft.; T.D. 3,479 ft.; H. F.W.; P.B. to 3,170 ft. and C.O.

Eldorado Ref. Co.'s No. 1 Wals, SE NE NW Sec. 29-13-11w.
Set 10-in. csg. 2,090 ft. and S.D.

Hartman & Blair's No. 1 Furthemyer, NE cor. Sec. 1-14-14w.
Drlg. 270 ft.

Hartman & Blair's No. 1 Garrett, SW SW NW Sec. 24-13-12w.
Moving in material.

Hartman & Blair's No. 1 Krause, NE NW NW Sec. 5-15-15w.
Rig.

Hartman & Blair's No. 1 Sullivan, NE NE SE Sec. 2-14-15w.
T.D. 2,550 ft.; U.R. 8-in. csg.

Hartman & Blair's No. 1 Gurney, SE SE NW Sec. 23-14-14w.
Oswald at 2,932 ft.; 6-in. csg. 3,053 ft.; pay 3,001-06 ft.; swabbed 130 bbls. 18 hrs.

Lario O. & G. Co. et al's No. 1 Nuss, NW SW SW Sec. 11-16-14w.
Location.

Lario O. & G. Co. et al's No. 1 Moore, 760 ft. S and 660 ft. E, NW cor. Sec. 34-13-12w.
Drlg. 2,115 ft.

Murphy et al's No. 1 Funk, SW cor. Sec. 19-12-13w.
Spudded.

Wolf Creek Oil Co.'s No. 1 Donovan, SW SW SE Sec. 10-15-15w.
8-in. 2,490 ft.; drlg. 2,855 ft.

Wolf Creek Oil Co.'s No. 1 Kraft, SW cor. Sec. 26-16-11w.
Rig on ground.

Wolf Creek Oil Co. et al's No. 1 Penn Mutual, SW cor. Sec. 22-15-15w.
Rig.

SALINE COUNTY

Dieter et al's No. 1 Herrington, NE NW SE Sec. 3-13-1w.
T.D. 2,420 ft.; U.R. 8-in. csg.

SCOTT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Vanimon, C SE NE Sec. 15-20-33w.
6-in. liner 4,680 ft.; pay 4,670-86 ft.; acidized and pump 572 bbls. in 24 hrs.; T.D. 4,688 ft.; S.D.

SEDGWICK COUNTY

Aladdin Pet. Co. et al's No. 1 D. Lauck, SE NE NW Sec. 21-28-2.
10-in. csg. 1,130 ft.; T.D. 1,875 ft.; straightreaming.

Allison & Fitzwilliams et al's No. 1 Struthers, NE SW Sec. 34-28-2w.
H.F.W. 2,176-87 ft.; T.D. 3,295 ft.; fishing.

Cameron, Derby Oil Co. and Trees' No. 1 Brainard, SW SE NW Sec. 19-24-2.
Spudded and S.D.

Magnolia Pet. Co.'s No. 1 Bartholomew, SE SE SW Sec. 30-27-4w.
Chat 3,632 ft.; 9-in. 3,692 ft.; standardizing.

Syndicate O. & G. Co. et al's No. 1 Ratcliff, NE NW NW Sec. 30-26-2.
P.B. to 3,985 ft.; fishing.

SHAWNEE COUNTY

Jim Edwards' No. 1 Detrick, C NW NE Sec. 21-14-15.
Drlg. 560 ft.

STAFFORD COUNTY

Atlantic Oil Prod. Co.'s No. 1 Hohner, NW SE SE NE Sec. 31-23-14w.
K.C. lime 3,616 ft.; drlg. 3,725 ft.

Atlantic Oil Prod. Co. and Phillips Pet. Co.'s No. 1 Guthrie, C NW NW Sec. 16-25-11w.
10-in. 2,605 ft.; drlg. 2,855 ft.

SUMNER COUNTY

T. Palmer's No. 1 Wentworth, NW NW NE Sec. 9-35-2.
T.D. 2,650 ft.; S.D.

D. J. Wallace et al's No. 1 Clark, 1,320 ft. from W and 25 ft. from S line of NW Sec. 15-35-1w.
Ponds dug.

TREGO COUNTY

Central Commercial's No. 1 Wagg, NW NW SE Sec. 17-13-21w.
Drlg. 1,305 ft.

A. D. Morton's No. 1 Jones, SE cor. Sec. 20-12-23w.
Moving in material.

Gulf Coast Wildcats

(Continued from Page 58)

400 ft. W of No. 24 and in line with Nos. 24 and 21.
10¾-in. csg. 3,380 ft.

Yount Lee Oil Co.'s No. 28 Chambers County, 50 ft. N of S line, direct offset to Sun's No. 10 Chambers County, Wm. Bloodgood Sur.
Derrick.

Yount Lee Oil Co.'s No. 18 Chambers, 215 ft. from N line, 1,500 ft. from W line, Wm. Bloodgood Sur.
T.D. 4,421 ft.; pumping 70 bbls.

BOLING—FORT BEND COUNTY

Allied Minerals, Inc.'s No. 1 J. H. Blackwell, 1,400 ft. from E line, 100 ft. from S line of 50-ac. of J. H. Blackwell 100 ac., John Huff Sur.
S.D. for rig repairs 4,495 ft.

Midland Oil Co.'s No. 1 P. F. Coulter, 150 ft. from S line, 4,174 ft. from W line of 100-ac. tract, Miller League No. 2.
Set screen; T.D. 4,186 ft.

Allied Minerals, Inc.'s No. 1 E. C. Farmer, James Scott League, 750 ft. SE of NW line and 150 ft. SW of NE line of Gulf Prod. Co.'s E. C. Farmer 50-ac. tract.
Replugging the hole.

Irwin Larsen et al's No. 1 J. R. Farmer, 100 ft. NW and 100 ft. SW from E cor. of 125-ac. lease, James Scott Sur.
Location.

Trans-State Oil Co.'s No. 1 Dipple, E flank of dome.
10-in. csg. at 592 ft.

THOMPSON COUNTY

Humble O. & R. Co.'s No. 29-B Lockwood & Sharpe, 2,292 ft. W of E line, 376 ft. S of N line, 590 ft. E of No. 25.
Drlg. shale 4,355 ft.

Naylor Oil Co.'s No. 6 Gehr, 340 ft. from S line, 460 ft. from E line of No. 4 Gehr, S. Kennedy Sur.
7-in. csg. 5,297 ft.; T.D. 5,389 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 41 Moore, 3,372 ft. S along W line from NW cor. of James Frazier Sur., and 2,154 ft. at R/A.
Drlg. gumbo and lime 1,507 ft.

Gulf Prod. Co.'s No. 42 Moore, 345 ft. S, 305 ft. W of SW cor. of E.M.G. Co. Sur.
Building derrick.

Gulf Prod. Co.'s No. 43 Moore, 350 ft. E along S line of SW cor. of E.M.&G. Co. Sur. and 740 ft. N at R/A to said line of lease, 350 ft. E of No. 3 Moore.
Location.

SUGARLAND—FORT BEND COUNTY

Humble O. & R. Co.'s No. 12 Nelson.
Drlg. sandy shale 3,528 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 42 Cade, N. Fitzsimmons Sur., half way between Nos. 26 and 28 and 150 ft. E at R/A.
Drlg. shale 5,323 ft.

Yount Lee Oil Co.'s No. 44 Cade.
Drlg. shale 3,928 ft.

Yount Lee Oil Co.'s No. 23 Smith.
Drlg. sand and shale 4,364 ft.

Yount Lee Oil Co.'s No. 2 Stewart.
Drlg. shale and lime 4,434 ft.

DICKINSON—GALVESTON COUNTY

Humble O. & R. Co.'s No. 1 Schoper, C 8¼ of Blk. 15, or on line between Lots 3 and 4 and center N and S, W. K. Wilson Sur.
Drlg. shale 3,600 ft.

Humble O. & R. Co.'s No. 1 H. O. and W. G. Jones, 750 ft. N of N bank of Bayou and center T and W. J. O. Sherman Sur.
16-in. csg. 225 ft.; drlg. shale 231 ft.

Humble O. & R. Co.'s No. 1 A. F. Danielson, center of 10-ac. tract, being Lots 6 and 7 of Righter Subd., John Sellers Sur.
9⅝-in. csg. 7,425 ft.; T.D. 7,428 ft.

ARRIOLA—HARDIN COUNTY

Houston Oil Co.'s No. 3-X fee, 2,150 ft. S of N line of lease and 150 ft. E of W line of Unit X.
Coring sand shale 4,580 ft.

BATSON—HARDIN COUNTY

John Deering's No. 1 Cruse.
Drlg. shale 4,390 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 11-R Jordit, 200 ft. due S from No. 9-R Jordit.
Prepare to set screen; sand 1,280-1,322 ft.; T.D. 1,326 ft.

SOUR LAKE—HARDIN COUNTY

Arlis Pet. Co.'s No. 1 Harkan and Langham.
Dig pits.

Alpha Pet. Co.'s No. 2-A Wm. Weiss, 100 ft. W of No. 2.
Drilling plug.

Sun Oil Co.'s No. 2 Bernard Corp., 150 ft. from N and W lines of Lot 11, H.T.&B. Sur., Sec. 69.
Coring shale 7,914 ft.

GOOSE CREEK—HARRIS COUNTY

Humble O. & R. Co.'s No. 80 Simms-Smith, Scott Lower League, 1,000 ft. E of the most westerly W line, and 300 ft. N of the most northerly S line.
Milling 6,130 ft.; T.D. 6,855 ft.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Prod. Co.'s No. 21 Taylor.
Drlg. shale 5,850 ft.

Rio Bravo Oil Co.'s No. 27-A Settegast, 377 ft. S, 553 ft. W of NE cor. of Settegast "A" tract, James Hamilton Sur.
Perforated csg. from 5,470-95 ft.; T.D. 5,526 ft.

Rio Bravo Oil Corp.'s No. 9-A Settegast, 1,575 ft. N line, 350 ft. E line NE cor. "A" lease, J. A. Kopman Sur.
T.D. 5,411 ft.; standing.

MYKAWA—HARRIS COUNTY

Danciger O. & R. Co.'s No. 2 Minneter, 150 ft. from S line and 87.5 ft. from E line of Blk. 192, Wm. Lovett Sur.
Derrick.

Danciger O. & R. Co.'s No. 1 Williams, SW cor. of 29-ac. lease.
7-in. csg. 4,810 ft. T. D. 4,867 ft.
Waiting on cement.

West Prod. Co.'s No. 1 Medelsohm & Ryeman, Block 13, F. J. Rathos Survey.
Drlg. shale 2,972 ft.

TOMBALL—HARRIS COUNTY

Amerada-Stanolind's No. 1 Doyle, 210 ft. from most southerly S line to C of W and E line of 34-ac. lease and approx. 4,950 ft. from W line and 575 ft. from S line of Joseph House Sur.
Reaming 5,681 ft.

Humble O. & R. Co.'s No. 1 Hilligeist, 466 ft. N of S line, 502 ft. W of E line.
Drlg. shale and lime 4,861 ft.

Humble Oil & Ref. Co.'s No. 3-A Schultz, 435 ft. E of WL, 700 ft. N of SL, C Goodrich Survey.
7-in. csg. 5,567 ft.; drlg. 5,572 ft.

Humble O. & R. Co.'s No. 2 Gebhart, 466 ft. E of W line, 900 ft. S of N line of survey.
7-in. csg. 5,493 ft.; T.D. 5,566 ft.; I.P. 1,670,000 ft. of gas per day; tubing pressure 2,050 lbs.; csg. pressure 2,000 lbs.

Humble O. & R. Co.'s No. 6-B Quilter, 466 ft. W of E line of "B" tract, 1,090 ft. N of S line, A. Sanchal Sur.
T.D. 5,564 ft.; I.P. 24 bbls. per hr.; tubing pressure 1,000 lbs.

Humble O. & R. Co.'s No. 1 Melo, 535 ft. S of N line, 584 ft. E of W line of 344 acres, C. N. Pillot Sur.
7-in. csg. 5,541 ft.; pulling screen and liner to D.D. after testing gas; T.D. 5,550 ft.

Humble O. & R. Co.'s No. 7 Reid, 623 ft. from W line, 1,350 ft. from S line, C. Goodrich Sur.
10¾-in. csg. 950 ft.; drlg. shale 2,409 ft.

Texas Co.'s No. 3 R. W. Hirsch, 510 ft. W of E line and 466 ft. N of S line of lease.
Drlg. sand and boulders 619 ft.

KITTRELL—HOUSTON AND WALKER COUNTIES

Humble O. & R. Co.'s No. 5 Shaw, 990 ft. N and 330 ft. E of SW cor. of the Shaw 100-ac. tract in Charles McEllis Sur.
Top oil sand 1,928 ft.; 7-in. csg. 1,961 ft.; I.P. 15 bbls. per hr. through ¾-in. choke; tubing pressure 50 lbs.; csg. pressure 100 lbs.

Kellough & Tucker No. 1 L. W. Huffman, 10 ft. SW, 10 ft. NW of most southerly corner of Humble Oil & Ref. Co.'s lease, Charles McEllis Survey.
Drlg. 473 ft.

Sunoil Co.'s No. 1 Huffman Charles Mc-10-in. csg. 317 ft.; drlg. shale 600 ft.

VANDERBILT—JACKSON COUNTY

Imperator Oil Co.'s No. 1 Dutton, S C of Lot No. 11, Blk. 25, 450 ft. S of R.R. and 1,350 ft. W line of townsite, Ray Musquiz Sur.
Rigged up and S.D.

Turman Oil Co.'s No. 1 T. H. Miller, 150 ft. each way out of E 50 ac. of Miller 100-ac. tract in Ray Musquiz Sur.
Rigging up.

BIG HILL—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 1-A Pipkin, 2,640 ft. S and 2,050 ft. W of NE cor. of survey.
Drlg. shale 6,329 ft.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 4 Junker, 150 ft. S of N line, 150 ft. W of E line, Tug Junker 240-ac. tract, Wm. Smith League.
T.D. 3,845 ft.; I.P. 744 bbls. in 17 hrs. through ¼-in. choke; tubing pressure 100 lbs.

CLEVELAND—LIBERTY COUNTY

Blackgold Pet. Co.'s No. 1 R. D. McDonald, 30 ft. due W of Gulf Prod. Co.'s 6-C Kirby, T. Devers Sur.
T.D. 5,839 ft.; fishing for swab; T.D. 5,-839 ft.

William J. Colegrove et al's No. 1 State School Land & Dev. Co., 446 ft. from W line and 170 ft. from S line of survey, Clayton Rooper Sur.
Location.

Gulf Prod. Co.'s No. 8-C Kirby, 933 ft. due E of No. 1 Kirby.
Shale 4,875 ft.

ESPERSON—LIBERTY COUNTY

General Crude Oil Co.'s No. 15 Meores Bluff, midway between No. 10 and No. 12 Meores Bluff.
Drlg. sand and shale 3,637 ft.

General Crude Oil Co.'s No. 9 Davis, 1,320 ft. each way from S and E lines of lease in D. Kokernut Sur.
Comp.; 21 bbls. per hr.; ⅛-in. choke.

General Crude Oil Co.'s No. 1 W. D. Kay, Malcolm Duncan Sur., 1,537 ft. along N T.D. 5,928 ft.; reaming 5,847 ft.

General Crude Oil Co.'s No. 10 Davis, 2,000 ft. from E line, 660 ft. from S line of D. Kokernut Sur.
Building derrick.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 4 Crow & Jacobs, 150 ft. E, 420 ft. N of SW corner of lease, Section 21, H & T C Survey.
Drlg. sand 2,519 ft.

Gulf Prod. Co.'s No. 1 Hankomer, 350 ft. W, 420 ft. N of SE corner of George Stingler Survey.
Location.

HULL—LIBERTY COUNTY

Gulf Prod. Co.'s No. 12 W. L. Thomas, 1,-650 ft. N and 150 ft. E of SE cor. of 300-ac. tract, Jessie Devore Sur.
Drlg. shale 6,378 ft.

G. R. Brown and S. F. Bashara's No. 1 David Hannah, Jesse Devore league, 200 ft. S line, 150 ft. E line, 42-ac. Gulf tract.
Derrick.

Sterling O. & R. Co.'s No. 1 Taylor, 130 ft. S of S line of tract, and 5,500 ft. E of E line of 5-ac. tract, J. Devore Sur.
Drlg. salt 4,812 ft.

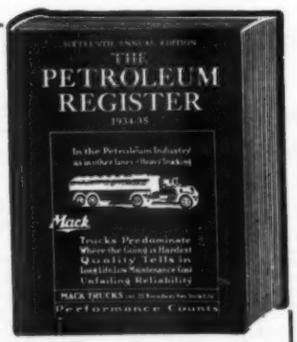
Texas Co.'s No. 3 Barrow.
T.D. 4,355 ft.; P.B. 4,194 ft.; swabbing.

BUCKEYE—MATAGORDA COUNTY

United North & South Dev. Co.'s No. 1 Unit 4, Buckeye farm, J. C. Keller league, 214 ft. N line and 202 ft. E line of lease.
Shut down.

CONROE—MONTGOMERY COUNTY

Humble O. & R. Co.'s No. 73 South Tex.



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Dev. Co., 6,000 ft. E of most easterly W line, 466 ft. S of N line of Theo Slade Sur. Drlg. shale 5,085 ft.

Houston Oil Co.'s No. 11 Cartwright, N offset to No. 10 Cartwright. Cmtd. 7-in. csg. at 5,189 ft.; W.O.C.

Sun Oil Co.'s No. 23 Foster, 799.5 ft. S of No. 12, 892 ft. W of No. 12, J. Brecker Sur. Building derrick.

SPLENDORA—MONTGOMERY COUNTY

Bryce McCandless et al's No. 1 Texas Long Leaf Lbr. Co., 330 ft. from N and E lines of the W½ of Blk. No. 8, Walker County School Land Sur. Derrick.

ORANGE—ORANGE COUNTY

Trio Oil Co.'s No. 1 D. S. Comier, 69 ft. W of E line and 39 ft. S of N line of 6.33-ac. tract in W. M. Dyson Sur. Drlg. shale 2,010 ft.

TOM O'CONNOR—REFUGIO COUNTY

Quintana Oil Co.'s No. 2-B O'Connor, 500 ft. from W line, 260 ft. from S line of M. L. White Sur. Coring 7,359 ft.

Quintana Oil Co.'s No. 5 O'Connor, 3,125 ft. from S line, 466 ft. from E line of Blk. 4, Swisher Sur. Spudded.

Quintana Oil Co.'s No. 6-A O'Connor, J. M. Swisher Sur., Blk. 4. Derrick.

PORT NECHES—ORANGE COUNTY

Port Neches Pet. Corp. et al's No. 1 W. B. Organ, 450 ft. from NE line and 150 ft. from NW line of A. Schramm Sur., S of Port Neches Field. Drlg. shale 5,320 ft.

Texas Co.'s No. 2-B Polk, 695 ft. W and 150 ft. S of NE corner of Jacob Beaumont Survey. Rig up to work over.

Texas Co.'s No. 3-B Polk, 200 ft. S, 450 ft. W of SE cor. of Mary E. Hall Sur. No. 3. Prepare to set screen; T.D. 5,933 ft.

Texas Co.'s No. 10 Kuhn, 300 ft. N, 450 ft. W of SE cor. of Mary E. Hall Sur. No. 3. T.D. 5,970 ft.; cmtd. back 5,945-5,845 ft.; prepare to set screen.

LIVINGSTON—POLK COUNTY

Gem Oil Co.'s No. 1 Watt, 330 ft. N of S line, 330 ft. W of E line of lease, A. Viesca Sur. T.D. 4,246 ft.; flowed 72 bbls. of oil in 5 hrs.; tubing pressure 300 lbs.; csg. pressure 350 lbs.

Gem Oil Co.'s No. 6 Davis & Holmes, 653 ft. from W and 682 ft. from N line of survey, A. Viesca Sur. Location.

T. D. Humphries' No. 1 J. C. Whitforth. Derrick.

Ownby Drlg. Co.'s No. 1 H. J. Pratt, 200 ft. N and E of H. J. Pratt's 2,203-ac. tract, A. Viesca Sur. T.D. 4,250 ft.; to run electrical coring test.

GRETA—REFUGIO COUNTY

Atlantic and Stanolind's No. 7-G O'Brien. Derrick.

Hewitt & Daugherty's No. 12 Lambert. Rig up.

Humble O. & R. Co.'s No. 18 Heard, 466 ft. from N line, 1,399 ft. from W line of 500-ac. tract, J. H. Peoples Sur. 16-in. csg. 331 ft.; drlg. clay 337 ft.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 18 P. H. Rooke, 486 ft. SW of NE line, and 352 ft. W of E line. T.D. 4,911 ft.; I.P. 300 bbls. per day; ¼-in. choke; 775 lbs. tubing pressure; 650 lbs. csg. pressure.

Houston Oil Co.'s No. 13 W. J. J. Heard, 8 offset to United Prod. Co.'s well on N side of river. T.D. 6,401 ft.; P.B. to 2,660 ft.; set 7-in. csg.

United Gas Co.'s No. 4 Fannie Heard old well. Rigging up to work over.

United Gas Co.'s No. 3 Tom Heard old well. Moving in to work over.

United Gas Co.'s No. 10 Wilson Heard, runs 3,062 ft. along NE line Wilson Heard lease from S cor. of Houston Oil Co.'s F. V. W. Heard lease, 4,579 ft. to a point, thence at R/A to line 330 ft. to point of location. Derrick.

COLETO CREEK—VICTORIA COUNTY

Rupert Cox's No. 1 Antone Trybil, R. Manchola Sur. Derrick.

Plummer Oil Co.'s No. 3 Zimmer, 660 gt. NE of No. 2. Cmtd. csg. 2,815 ft.

McFADDIN-O'CONNOR DISTRICTS—VICTORIA AND REFUGIO COUNTIES

Texas Co.'s No. 9 McFaddin. Location.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 10 H. R. Clay. Coring 1,705 ft.

LOUISE—WHARTON COUNTY

Pure Oil Co.'s No. 3 Charles T. Kountze, 1,980 ft. SE and 330 ft. SW of N cor. of Morris & Cumming Sur., Sec. 9. P.B. to 4,900 ft.

Pure Oil Co.'s No. 1 John Macha, 318 ft. from NW line and from SE line of F. Walnut Sur., and 467 ft. from NE line of 101.53-ac. lease, M.&C. Sur. No. 25. Location.

Pure Oil Co.'s No. 1 G. Wharton Est., 1,497 ft. from SW line and 318 ft. from SE line of F. Walnut Sur., Abst. A-35. T.D. 6,610 ft.; P.B. 4,900 ft.

Pure Oil Co.'s No. 2 Stewart, Morris & Cummings Sur., Sec. 25, 990 ft. out of SW cor. of 160 acres. Coring sand 6,382 ft.

Pure Oil Co.'s No. 3 Stewart, 1,000 ft. SW and 318.25 ft. SE from N cor. of W. L. Stewart's 160-ac. tract, Morris and Cummings Sur. No. 25. Location.

Pure Oil Co.'s No. 4 Stewart, 485 ft. SW, 330 ft. NW of E cor. of W. L. Stewart's 160-ac. tract, Morris and Cummings Sur. No. 25. Location.

BAY ST. ELAINE—TERREBONNE PARISH

Texas Co.'s No. 9 Bay St. Elaine. Drlg. sand 6,396 ft.

CALLIOU ISLAND—TERREBONNE PARISH

Texas Co.'s No. 15 Calliou Island, Sec. 20-23-23. Abd. 3,911 ft.

Texas Co.'s No. 17 Calliou Island, Sec. 20-23-23. Rig up.

Texas Co.'s No. 18 Calliou Island. Drlg. 373 ft.

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Shell Pet. Corp.'s No. 2 State. T.D. 4,074 ft.; tested no oil or gas on D.S. test with seat at 4,053 ft.

Shell Pet. Corp.'s No. 11-C Watkins, 1,200 ft. S of NW cor., Sec. 17-12s-12w. Drlg. shale and boulders 902 ft.

Shell Pet. Corp.'s No. 3 State. T.D. 6,499 ft.; waiting on cmt. to set.

BOSCO—ACADIA AND ST. LANDRY PARISHES

Standard Oil Co. of Kansas' No. 1 Mouton, 1,480 ft. E. 250 ft. S of NW cor. of SW¼ Sec. 34-8s-3e. Drlg. shale 4,500 ft.

Superior Oil Prod. Co.'s No. 1 Coralie Domingua, 3,998 ft. S, 767 ft. W of NE cor. Sec. 34-8s-3e. Drlg. sand and shale 2,007 ft.

Superior Oil Prod. Co.'s No. 4 Hermandez, 450 ft. E and 330 ft. S of NW cor. of lease, Sec. 34-8s-3e. Drlg. sand and shale 6,295 ft.

Superior Oil Prod. Co.'s No. 7 Larcade, 2,467 ft. E, 190 ft. N of SW cor. N½ NW Sec. 35-8s-3e. Rig up.

Superior Oil Prod. Co.'s No. 1 E. Comeaux ("A" lease), 350 ft. S, 89 deg. 3 min. E, and 350 ft. S, 30 deg. 21 min. W, of SW cor. N¼ NE Sec. 35-8s-3e. 7-in. csg. 8,734 ft.; T.D. 8,743 ft.; I.P. 351 bbls. in 24 hrs.; 9/64-in. choke; comp. for gas well.

Superior Oil Prod. Co.'s No. 3 Comeaux, 1,324 ft. E of NW cor. NE Sec. 34. 7-in. csg. 8,050 ft.; T.D. 8,070 ft.

Superior Oil Prod. Co.'s No. 5 Larcade, 1,665 ft. S and 483 ft. E of NW cor. Sec. 35-8s-3e. 9⅝-in. csg. 7,845 ft.; T.D. 7,846 ft.

Superior Oil Prod. Co.'s No. 1 B. Iseringhauser, 330 ft. S and 2,546 ft. W of SE cor. Sec. 27-8s-3e. T.D. 7,843 ft.; I.P. 436 bbls. per day; tubing pressure 1,250 lbs.; csg. pressure 2,000 lbs.

Superior Oil Prod. Co.'s No. 1 Moise LaVergne, 269.7 ft. W and 98 ft. N of SE cor. of Sec. 28-8s-3e. Drlg. sandy shale 7,845 ft.

Superior Oil Prod. Co.'s No. 1 A. Allemond, 350 ft. S, 20 deg. S, 53 min. W, and 530 ft. N, 88 deg., 53 min. W of NE cor. of 37.13-ac. tract, Sec. 33-8s-3e. Drlg. sandy lime 3,221 ft.

Superior Oil Prod. Co.'s No. 2 M. Kahn, from SE cor. 2,563 N, 20 deg., 53 min. E and 1,000 ft. N, 89 deg., 23 min. W of Sec. 33-8s-3e. Coring sandy shale 8,501 ft.

Superior Oil Prod. Co.'s No. 1 C. B. Hermandez, 2,791.6 ft. S, 330 ft. W of NE cor. of NW¼ Sec. 34-8s-3e. Rig up.

EDGERLY—CALCASIEU PARISH

Emerson Oil Co.'s No. 1 Bright-Penn. W.O.; drlg. shale 3,526 ft.

Union Sulphur Oil Co.'s No. 3 Hunter, 1,160 ft. N and 220 ft. E of SW cor. SE Sec. 21-9s-11w. Fishing 2,627 ft.

CAMERON MEADOWS—CAMERON PAR.

Burton-Sutton's No. 1 School Land. Drlg. shale 4,600 ft.

Burton-Sutton Oil Co.'s No. 4 School Land, 2,891 ft. W and 150 ft. N of SE cor. of Sec. 16-4s13w. Derrick.

Texas Co.'s No. 1 Miami Corp. Drlg. 8,720 ft.

CHOCTAW DOME—IBERVILLE PARISH

Standard Oil Co.'s No. 5 Gay, 2,450 ft. S and 425 ft. E of NW cor. of NE Sec. 32-9s-11e. S.D. 42 ft.

DOG LAKE—TERREBONNE PARISH

Texas Co.'s No. 11 State, 150 ft. N and 2,474 ft. W, SE cor. Sec. 31-21s-16e. Derrick.

GARDEN ISLAND BAY—TERREBONNE PARISH

Texas Co.'s No. 13 State, 3,391 ft. S and 1,504 ft. W of NE cor. Sec. 107-23-32. Rig up.

Texas Co.'s No. 14 State, 667 ft. N and 992 ft. E of SW cor. Sec. 37-23-23. Pulling csg.; T.D. 2,324 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6, Alliance Trust, 667 ft. E. 1,787 ft. S line of lease, Sec. 34-11s-1w. Sidetracked 5,263 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 4 Hanzen, 1,650 ft. W and 780 ft. N of SE cor. Sec. 11-12s-10w. Drlg. shale 4,570 ft.

Calcasieu Oil Co.'s No. 3 H. C. Hanzen, 150 ft. S and 150 ft. E of NW cor. of lease. Sec. 13-12s-10w. T.D. 5,870 ft.; P.B. 4,766 ft.

Gulf Prod. Co.'s No. 14-B State, 610 ft. S, 1,866 ft. E of NE cor. Sec. 13-12s-10w. Location.

Sutton Oil Co.'s No. 1 Miller, 229 ft. N and 100 ft. E of SW Sec. 23-12s-10w. Drlg. shale 4,600 ft.

Texas Co.'s No. 14 State, 500 ft. SE of No. 13, Sec. 13-12s-10w. Location.

Union Sulphur Co.'s No. 3 Hanzen. T.D. 4,970 ft.; P.B. 4,540 ft.

Union Sulphur Co.'s No. 4 Hanzen. Drlg. shale 5,256 ft.

Yount Lee Oil Co.'s No. 1-A Gulf Land, 2,990 ft. S and 50 ft. E of the NW cor of Sec. 22-12-10. Rig up.

Yount Lee Oil Co.'s No. 12 Gulf Land, 1,625 ft. S and 350 ft. W of NE cor. of NW of Sec. 14-12s-10w. Drlg. shale 4,950 ft.

NKW IBERIA—IBERIA PARISH

Harrison & Abercrombie's No. 3 Schwing, 500 ft. N and 50 ft. E of No. 2, Sec. 34-12s-5w. Drlg. shale 3,835 ft.

Texas Co.'s No. 1 Hansen, NE along NW line of lease 508 ft., thence 150 ft. E at R/A, Sec. 54-12s-7e. Drlg. sand 5,937 ft.

IOWA—CALCASIEU AND JEFF DAVIS

Magnolia Pet. Co.'s No. 11 Wait, 330 ft. E, 330 ft. N of SW cor. NE SE Sec. 12. Prepare to drill plug 6,904 ft.

Shell Pet. Corp.'s No. 13 Hyda, 990 ft. S, 330 ft. E of NW cor. NE Sec. 13-9s-7w. T.D. 5,328 ft.; in sand showing oil.

Shell Pet. Corp.'s No. 6 Stafford, 1,650 ft. from S line, 330 ft. W of NE cor. of lease, Sec. 18-9s-6w. Drlg. sand and gravel 605 ft.

Shell Pet. Corp.'s No. 14 Heyd, 330 ft. N, 1,319 ft. W of SE cor. of NE¼ Sec. 13. Rig up.

JENNINGS—ACADIA PARISH

Simon-Tolson and Gardner's No. 1, 1,020 ft. due E and 250 ft. due W of SE cor. Sec. 46-9s-2w. Prepare to drill plug 1,858 ft.

Yount Lee Oil Co.'s No. 14 Housierre-Latrielle, 260 ft. N of No. 12, Sec. 47-9s-2w. Drlg. sand 7,710 ft.

Yount Lee Oil Co.'s No. 10 Housierre-Latrielle, 5,435 ft. due E, 1,070 ft. due N of SW cor. of section. Cutting and pulling screen.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 12 L.L.&E. Abd. 4,303 ft.

Texas Co.'s No. 13 Lake Barre. Abd. 4,015 ft.

Texas Co.'s No. 31 Lake Barre. Drlg. anhydrite 1,364 ft.

LAKE PELTO—TERREBONNE PARISH

Texas Co.'s No. 12 Lake Pelto. Drlg. sand and shale 5,567 ft.

Whitstone O. & G. Co.'s No. 1 Buckley, 300 ft. S and E of NW cor. SW SW Sec. 35-19s-16e. T.D. 3,390 ft.; P.B. to 3,053 ft.

LAKE WASHINGTON—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 23 Cockrell-Moran, 650 ft. N and 21 deg. 30 min. E of No. 2 in Twp. 20s-26e. Coring sand 4,363 ft.

LEESVILLE—LAFOURCHE PARISH

Gulf Prod. Co.'s No. 5 Allen. T.D. 3,580 ft.; I.P. 1,152 bbls. per day; 5/16-in. choke; tubing pressure 275 lbs.

Gulf Prod. Co.'s No. 10 Bernard, 1,833 ft. E, 958 ft. S of NW cor. Sec. 26-21s-22e. Derrick.

Emerald Pet. Co.'s No. 10 State, west bank, 300 ft. S of well No. 1. Location.

Emerald Pet. Co.'s No. 11 State, east bank, 227 ft. N of well No. 1. Location.

Emerald Pet. Co.'s No. 12 State, east bank, 250 ft. S of well No. 1. Location.

Leesville Oil & Gas Co.'s No. 1 Southern Louisiana Canal Navigation Co., 35 ft. W of Bank of Bayou, 15 ft. N of S bank, Sec. 26-21s-22e. Drlg. rock 4,505 ft.

Lincoln Oil Co.'s No. 5 State. Location.

Texas Co.'s No. 31 Leesville. T.D. 2,497 ft.; P.B. 1,485 ft.; drlg. shale 1,821 ft.

Texas Co.'s No. 23 Leesville. Rig up.

Texas Co.'s No. 27 Leesville. Canal completed.

Texas Co.'s No. 30 Leesville, 1,075 ft. S, 310 ft. E, NW cor. Lot 6, Sec. 26-21s-22w. Rig up.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 12 Bordages, 966 ft. W and 92 ft. N of SE cor. N½ NE Sec. 8-10s-19w. Reaming 7,714 ft.

Union Sulphur Co.'s No. 1 Moss (W.O.). T.D. 6,759 ft.; P.B. 6,540 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Ref. Co.'s No. 10 Wilson Cochran, 1,200 ft. S of most southerly NE cor. of Texas Co.'s Botany Bay lease, 600 ft. E at R/A to line lease, Sec. 4-4s-5e. Drlg. sand 3,070 ft.

ROANOKE—JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 2 Kratzer, 440 ft. from W line, 440 ft. from S line of 120-ac. tract, Sec. 11-4w-9s. Drlg. shale and sand 7,735 ft.

Humble O. & R. Co.'s No. 1 Clayton, 3,080 ft. S and 440 ft. W, NE cor. Sec. 10-9s-4w. Rig up.

Humble O. & R. Co.'s No. 1 R. C. Jarnegan, 440 ft. S, 440 ft. E of the NW cor. SE Sec. 12-9s-4w. Coring shale and lime 9,365 ft.

Humble O. & R. Co.'s No. 3 Devilbiss, 1,399 ft. W, 466 ft. S of NE cor. Sec. 14-9s-4w. T.D. 9,425 ft.; P.B. 9,330 ft.; swabbing.

Shell Pet. Corp.'s No. 1 Jarnigan, 330 ft. E. 660 ft. S NW cor. Sec. 12-9s-4w. Fishing; T.D. 9,909 ft.

Shell Pet. Corp.'s No. 1 Carter, 660 ft. N and 330 ft. W of SE cor. NW Sec. 1-9s-4w. To make D.S. test 7,450 ft.

Shell Pet. Corp.'s No. 2 Kratzer, 440 ft. N and 440 ft. E of SW cor. NW Sec. 12-9s-4w. Coring sand 7,625 ft.

STARKS—CALCASIEU PARISH

Gulf Prod. Co.'s No. 33 Lutcher Moore, Sec. 19-9s-8w. Cutting and pulling liner; T.D. 3,023 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 12 Yount Lee Oil Co., 800 ft. S of No. 11, in line with Nos. 9 and 11, Sec. 12-13s-3w. Drlg. shale 7,825 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Noble, E of No. 1. Drlg. sandy shale 5,111 ft.

Union Sulphur Co.'s No. 790 fee, 939 ft. S and 802 ft. W of C Sec. 29-9s-10w. Circulating 5,780 ft.

Union Sulphur Co.'s No. 2 Ulrich, 500 ft. N of No. 1. S.D. 6,230 ft.

VINTON—CALCASIEU PARISH

Vinton Pet. Co.'s No. 12 Gray, 605 ft. N and 374 ft. W of SE cor. Sec. 33-10s-12w. Drlg. wtr. sand 550 ft.

Wilson Broach's No. 9 Wilson. Waiting on cmt. 3,672 ft.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 1 White Castle Shingle Co., 1,830 ft. W, 100 ft. S from NE cor. of lease. Coring sand 4,556 ft.

MISCELLANEOUS WILDCATS

TEXAS

BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Houston Farm Dev. Co., 1,414 ft. N, 316 ft. W of SE cor. of L. Bachelder Sur. T.D. 7,040 ft.; cmtd. back 6,736 ft.

Big Creek Oil Co.'s (C. & R. G. Drlg. Co.) No. 2 Truska, 991 ft. W of No. 1, H.T.&B. Sur., Sec. 7. S.D. 935 ft.

Holt et al's No. 1 Griffith, J. B. Bailey Sur. T.D. 4,200 ft.; waiting orders.

Luling O. & G. Co.'s No. 1 Jameson, 600 ft. W of E line, 750 ft. S of N line of N. E. Roberts Sur. Drlg. gumbo 1,400 ft.

Showers & Moncrief's No. 1 Hughey, 5,500 ft. NW of discovery well, in center of Lot 18, H.T.&B. Sur., Sec. 29, Abst. 293. Location.

CALHOUN COUNTY

Continental Oil Co.'s No. 1 American Nat. Realty Co., C of NE of Sec. 6, Blk. C. Preparing to work over.

CHAMBERS COUNTY

Humble O. & R. Co.'s No. 1 Middleton, 466 ft. each way out of the SW cor. of survey. Drlg. shale 5,738 ft.

Sun Oil Co.'s No. 1 Hamilton, 1,400 ft. from N line, 1,400 ft. from W line of survey, T.&N.O. Sur., Sec. 128. Drlg. shale 7,980 ft.

COLORADO COUNTY

Danciger O. & R. Co. and L. E. Hults's No. 1 C. L. Raver, 990 ft. N and E of SW cor. 477 acres, Sec. 1, B.B.B.&C. Sur. Coring shale 6,333 ft.

George White et al's No. 1 M. M. Cravins, 1,000 ft. from N, 300 ft. W of SW cor. of survey, B.B.B.&C. Sur. No. 3. Location.

FORT BEND COUNTY

W. A. Shafer et al's No. 1 V. B. Bortash, 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur. S.D. 2,900 ft.

GALVESTON COUNTY

Gillock Pet. Co.'s No. 2 Maco Stewart, 990 ft. N and 150 ft. W of No. 1, Alex Farmer Sur. T.D. 1,500 ft.; waiting on surface pipe; S.D.

Texana Gulf Oil Corp.'s No. 1 Thomas Shaw (200 acres), 150 ft. NW line, 165 ft. NE line, Lot 66, Sec. 7, Hall & Jones, Galveston Island. Drlg. shale 6,197 ft.

GRIMES COUNTY

Hubert Holt et al's No. 1 Simon Fuqua, 1,200 ft. N of S line and 400 ft. W of E line of 177-ac. lease and survey, Moses Evans Sur. S.D. 3,080 ft.

Dr. Marshall et al's No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1). S.D. 2,005 ft.

Roan et al's No. 1 S. W. Sealy, 3,474 ft. N of S line and 850 ft. E of W line of survey, B. F. Smith Sur., 2 miles SW of Kellum Springs. S.D. 2,650 ft.

HARRIS COUNTY

Cockburn Oil Co.'s No. 1 Brooks, 7,400 ft. SW of NE cor. of Robert and Richard Vinee Sur. S.D. 5,073 ft.

Cockburn Oil Co. and Frazier's No. 1 Herman Hospital, 910 ft. N, 300 ft. W of SE cor. of tract. Moving in rig.

Esco Oil Co.'s No. 1 E. P. Seureau, 3,232 ft. from W line and 2,215 ft. from S line of 350-ac. tract, W. P. Harris Sur., Abst. A-30. S.D. 6,023 ft.

Goldston et al's No. 1 Weingarten, 467 ft. out of NE cor. of H.&T.C. Sur., Sec. 39. Drlg. shale 6,070 ft.

T. S. F. Oil Co.'s No. 1 J. B. Hine, Arthur McCormick Sur., Abst. 46. Drlg. shale 3,950 ft.

C. C. Foster et al's No. 1 H. K. Johnson, 2,000 ft. from S line and C of E and W lines of G.C.&S.F. Sur. Drilled 25 ft. and S.D.

Means and McGehee, Inc.'s No. 1 Laura Lackner, 9,857 ft. W and 2,803 ft. N, of H. Rinerman Sur. Drlg. shale 3,200 ft.

Means & McGehee's No. 1 Herbert Neuhaus, 400 ft. from S and E lines of 154.55-ac. tract, Wm. P. Morton Sur. Moving in rig.

Hill & Hill's No. 1 Wharton, 466 ft. from NW cor. Sec. 5, W.C.R.R. Sur. Building derrick.

W. U. Paul's No. 1 E. M. House, 2,200 ft. N and 1,000 ft. E of NE cor. of E. Benson Sur. in M. Magruder Sur. S.D. 3,750 ft.

HOUSTON COUNTY

Adams et al's No. 1 Sanders, 330 ft. from S line, 330 ft. from W line of 55-ac. tract

of lease, J. Thomas Sur.
S.D. 1,635 ft.

JACKSON COUNTY

A. M. Harris' No. 1 Whitley, 800 ft. out of SE cor. of F. G. Keller Sur.
Location.

JEFFERSON COUNTY

Sun Oil Co.'s No. 1 H. Long, 1,500 ft. E line, 990 f. S line of lease.
Fishing 9,045 ft.

Sun Oil Co.'s No. 1 Hebert & Braussard, 6,890 ft. NW along SW line and 660 ft. NE at right angles to SW line, B. Blackman Sur., Abst. No. 2.
Rig up.

LIBERTY COUNTY

R. M. Bruner et al's No. 1 N. Bell, 150 ft from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No 4
Rigging up.

Extension Oil Co.'s No. 1 J. A. Lovett, 280 ft. from E and 600 ft. from S line of lease C. P. Deevers Sur.
Drlg. shale 4,163 ft.

Liberty-Independent Oil Co.'s No. 1 J. M Neal, 3,550 varas from E line and 500 varas from N line of Samuel Strong Sur
Drlg. shale 3,730 ft.

A. L. Maxwell's No. 1 M. P. Hinchliff, 200 ft. from E line and 1,000 ft. from the N line of survey, H.&T.C. Sur., Sec. 10s.
Rig up.

Thomas et al's No. 1-A Eicke, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
T.D. 5,047 ft.; 4⅝-in. csg. at 5,029 ft.

MATAGORDA COUNTY

Cockburn Oil Co.'s No. 6 Hawkins, 2,600 ft from NW line, 1,200 ft. from SW line of McCarthy Sur
T.D. 5,484 ft.; heaving shale; washing to bottom.

Dr. Griffith's No. 1 fee, 3,000 ft. from E line and 3,000 ft. from W line of Wm. H Bell Sur.
Rigging up and S.D.

Horace M. Smith, Inc.'s No. 1 Wadsworth ranch, 150 ft. out of S cor. of Lot No. 8 Blk. S, R. Fisher Sur.
S.D. 3,500 ft.

MONTGOMERY COUNTY

Reynolds Drlg. Co. et al's No. 1 Mrs. Clara B. Stewart, 330 ft. S and E of most easterly inner cor. of 595-ac. tract, John Corner Sur.
S.D. 5,500 ft.

Walter Keeble's No. 1 Foster, 700 ft. E of W line, 2,000 ft. N of S line, Lot 27.
Cmtd. 10-in. csg. 226 ft.

Woodard-Smith-Cooper's No. 1 J. V. Scott, F. A. B. Wheeler Sur.
Drlg. shale 3,076 ft.

ORANGE COUNTY

Blue Line Oil Co.'s No. 1 Godwin, Richard Ballew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 20-ac. tract.
S.D. 2,770 ft.

POLK COUNTY

C. & C. Drlg. Co.'s No. 1 Granbury & Smith, 600 ft. N and 600 ft. W from most western NW cor. of Gulf Prod. Co.'s Graybury & Smith lease, in the Wm. Shadburn Sur.
Rig up.

Howard Dailey et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 16 miles NE of Corrigan.
S.D. 60 ft.

J. F. Anderson's No. 1 E. L. Duke (O.W.D. D.), 400 ft. from E and 350 ft. from S of SW cor. of P. Michelick 50-ac. lease, Abst. 59, P. J. Mineral Sur.
Waiting on a new mud pump; T.D. 5,304 ft.

Marathon Oil Co.'s No. 1 A. S. Jones, 990 ft. from NW and SW lines of J. D Thomas Sur.
Abd. 3,682 ft.

Dick Schwab's No. 1 Lynch, 330 ft. out of NW cor. of 200-ac. tract in the George Jameson Sur.
Location.

E. A. Thompson's No. 1 Haynes, 990 ft. out of NW cor. of 320-ac. tract and survey, J. Whitmire Sur., E of Leggett.
Rig up.

West Prod. Co.'s No. 1 W. T. Carter, 330 ft. due E of SE cor. of W. D. Johnson's 53.7-ac. lease, 3½ miles E of Livingston Field, S. C. Hiram Sur., Abst. A-37.
Location.

REFUGIO COUNTY

Atkins & O'Neil's No. 1 M. Woods, 466 ft. from N and E lines of NW Sec. 3.
Abd. 6,381 ft.

Cecil Hagen et al's No. 1 Edith Clarkson, 1,736 ft. from N line, 3,820 ft. from E line of J. Coughlin Sur.
Location.

Magnolia Pet. Co.'s No. 1 F. B. Roake, 330 ft. from S line, 7,150 ft. from W line of Donna Roogas Sur.
Abd. 6,035 ft.

SAN AUGUSTINE COUNTY

Fidelity Exploration Co.'s No. 2 Bryan & Flournoy, 400 ft. from No. 1.
T.D. 1,565 ft.

TRINITY COUNTY

Moore and McLaughlin's No. 1 White, 250 varas from N line, 263 varas from E line of 56-ac. tract, Goff Sur.
Spudded.

WALKER COUNTY

Seaport Oil Co.'s No. 1 W. B. Ross, in SE cor. of an 80-ac. tract out of the Wm. Hodge Sur.
Drlg. 3,510 ft.

WALLER COUNTY

Stanolind O. & G. Co. et al's No. 1 J. W. Tharp, 466 ft. from S and E lines of J. M. Bennett Sur. No. 100.
Coring shale 7,627 ft.

WHARTON COUNTY

John Deering's No. 1 C. T. and D. Kountze, 1,320 ft. from N line, 330 ft. from E line of S.A.&M.G. Sur., Sec. 1, Abst. 328.
Moving in rig.

Texas Co.'s No. 1 Pierce Estate, 4,850 ft. S, 34 deg. E and 4,300 ft. N, 56 deg. E from W cor. of Tract 2, I.&G.N. Sur. No. 38.
Moving in material.

SOUTH LOUISIANA
ACADIA PARISH

Humble O. & R. Co.'s No. 1 American Rice Mills, 660 ft. S and 1,320 ft. W from NE cor. Sec. 27-10s-1e.
Drlg. sandy shale 7,742 ft.

Superior Oil Co. et al's No. 1 A. S. Newman, 2,000 ft. N and 1,120 ft. E of SW cor. Sec. 24-7s-1w.
Drlg. shale 7,507 ft.

ASCENSION PARISH

Humble O. & R. Co.'s No. 2 S. Gumbel & Co., 500 ft. southwesterly from No. 1, 275 ft. easterly from road and approx. 475 ft. N of S line of tract. Sec. 33-10s-2e.
Pulling screen and liner; T.D. 5,716 ft.

AVOYELLES PARISH

Southern State Pet. Co.'s No. 1 Boyette, 330 ft. N and 330 ft. E of SW cor. Sec. 28-3n-5e.
Cmtd. surface csg. 444 ft.

BEAUREGARD PARISH

Richardson & Martin's No. 1 Southwest Lbr. Location.

CALCASIEU PARISH

Fred Oil Co.'s No. 2 Faizst, 262 ft. E and 33 ft. S of NW cor. SE¼ Sec. 26-8s-10w.
Location.

Fohs Oil Co.'s No. 1 McIvor, 330 ft. S and W of NE cor. Sec. 14-9s-8w.
Location.

Fohs' No. 1 O. H. Castle, 330 ft. S and 330 ft. W of C Sec. 18-9s-3w.
Cored oil sand 7,051-63 ft.

Gulf Prod. Co.'s No. 1 H. Starks et al, 1,650 ft. W and 1,980 ft. S of NE cor. Sec. 26-11s-12w.
Drlg. sand 4,747 ft.

Nicholas McCaleb's No. 1 Grey, 2,200 ft. S, 1,200 ft. E of NW cor. Sec. 22-8s-13w.
Derrick.

Texas Co.'s No. 1 Nickerson, 3,139 ft. N and 3,238 ft. W of SE cor Sec 12-9s-8w.
Drlg. sand and gravel 1,109 ft.

Union Sulphur Co.'s No. 1 Powell Lbr. Co., 600 ft. N of No. 1 State, Sec. 12-9s-8w
Drlg. sandy shale 6,476 ft.

Union Sulphur Co.'s No. 2 State, 748 ft. S and 8 ft. E, NW cor. SW Sec. 12-9s-8w.
Drlg. shale 5,158 ft.

Union Sulphur Co.'s No. 3 State, 2,135 ft. S, 2,340 ft. E of NW cor. Sec. 12-9s-8w.
Location.

Union Sulphur Co.'s No. 1 Castle, 326 ft. N and E of NW Sec. 13-9s-8w.
Drlg. shale 3,465 ft.

Union Sulphur Co.'s No. 1 Buhler, 1,485 ft. N and 425 ft. W of SE cor. Sec. 11-9s-8w.
Drlg. shale 5,130 ft.

Wheeler Oil Co.'s No. 1 Gabbert, 1,322 ft E and 548 ft. N of SW cor. of Sec. 28-9s-7w.
Drlg. sandy shale 8,100 ft.

EAST FELICIANA PARISH

Thompson Creek Oil Co.'s No. 1 Fannie Noland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 70.
S.D. 1,490 ft.

CAMERON PARISH

Texas Co.'s No. 1 Jessen, 1,170 ft. E and 550 ft. N of C Sec. 24-14s-10w.
T.D. 6,382 ft.; to sidetrack.

JEFFERSON DAVIS PARISH

George W. Strake's No. 1 Calcasieu Natl Bank, 200 ft. S and E of NW cor. SE NE Sec. 12-9s-6w.
T.D. 8,019 ft.; P.B. to sidetrack.

JEFFERSON PARISH

Texas Co.'s No. 1 Bayou St. Dennis, 20,907 ft. S, 4,853 ft. E of NW cor. of Twp., Sec. 19-17s-24e.
Rig up.

LAFOURCHE PARISH

Emerald Pet. Co.'s No. 1 Bowie Lumber Co., 4,431 ft. N and 1,632 ft. E of SW cor. Sec. 53-10s-8e.
Drlg. shale 8,455 ft.

Southern Sulphur Corp.'s No. 1 D. L. Lagraize, 800 ft. E of NW cor. of Lot 7, thence 250 ft. S of Sec. 26-21s-22e.
Spudded and shut down.

PLAQUEMINES PARISH

Venice Corp.'s No. 1 Burras.
Drlg. cap rock 1,900 ft.

RAPIDES PARISH

J. B. Evers' No. 1 G. Wettermark, 540 ft. S and 520 ft. E, NW cor. NE SW Sec. 35-6n-2e.
Rig up and S.D.

C. D. Lee's No. 1 Barrett, 330 ft. NW of SE line and 880 ft. NE of SW line of Sec 40-5n-1w.
Rig up and S.D.

Williams-Terrell & Day's No. 1 Armstrong & Murphy, 286 ft. N and 300 ft. W of SE cor. Sec. 24-5n-1w.
Derrick.

ST. BERNARD PARISH

Danciger's No. 1 Battles, 836 ft. N, 2,198 ft. W of SE cor. Sec. 135-14s-14e.
Cmtd. csg.; moved off rig; T.D. 6,001 ft.

ST. LANDRY PARISH

Bailey Gaunce's No. 1 Lewis, 300 ft. N and E of SW cor. of NW of NE of Sec. 19-5s-6e (workover).
Abd. 5,043 ft.

H. J. Weir's No. 1 Declouet, Sec. 108-8s-5e, near Lafayette Parish line and 3 miles N of Anse La Bute Field.
S.D. 2,322 ft.

TANGIPOHA PARISH

R. A. Compton's No. 1 Lake Superior Piling Co., 300 ft. W and N of SE cor. Sec. 19-5s-9e.
Drlg. shale 850 ft.

VERMILLION PARISH

Moore Bros.' No. 1 Brussard, 350 ft. S of N line, 250 ft. E of W line, NE cor. Sec. 32-11s-3e.
S.D. 4,056 ft.

La.-Ark. Wildcats

(Continued from Page 63)

200 ft. S and E, NW cor. NE NW Sec. 6-6s-4w.
Arranging to test 1,724 ft.

ASHLEY COUNTY

J. D. Houseman et al's No. 1 Boreine Farms, 660 ft. S and W, NE cor. Sec. 1-18-8.
Derrick.

HEMPSTEAD COUNTY

A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26.
S.D. 1,992 ft.

LAFAYETTE COUNTY

W. H. Harvey's No. 2 Allen, Sec. 18-19-24.
S.D. 850 ft.

LONOKE COUNTY

J. G. Strahan's No. 1 Hardin, Sec. 18-2s-7w.
Drlg. 1,365 ft.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 4 Beck, SE cor. SE SW Sec. 34-15-26.
W.O.S.R. 2,941 ft.

Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 20-15-27.
S.D. 3,177 ft.

Ark. Oil, Gas & Ref. Co.'s No. 1 Beck, SW cor. NW SW Sec. 34-15-26.
1,200 ft. oil in hole at 2,920 ft.

King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E, SW cor. SW NE Sec. 24-14-28.
S.D. 3,167 ft.

Magnolia Pet. Co.'s No. 6 Olivet, 330 ft. S and E, NW cor. NE NW Sec. 3-16-26.
W.O.S.R. 2,933 ft.

A. C. Roan's No. 1 Frost Est., 150 ft. N and W, SE cor. SE SW Sec. 8-15-26.
Set 10-in. 120 ft.

Thorntree Oil Corp.'s No. 2 E. H. Beck, SE cor. SW SW Sec. 34-15-26.
Comp.; pumping 250 bbls., 2,933 ft.

Lee Timberlake's No. 1 Frost Est., 330 ft. N and E, SW cor. SW SE Sec. 27-15-26.
S.D. 1,275 ft.

John Wrather's No. 2 H. E. Beck, 330 ft. N and W, SE cor. SW SE Sec. 34-15-26.
Rigging up.

OUACHITA COUNTY

F. A. Book et al's No. 1 Arnold, Sec. 24-15-16.
S.D. 2,032 ft.

S. J. Carnes' No. 1 L. Caldwell, 330 ft. S and E, NW cor. Sec. 12-14-19.
Drlg. 450 ft.

T. J. Gaughan's No. 2 M. Bragg, 330 ft. S and E, NW cor. NE SE Sec. 25-13-18.
Set 6⅝-in. 1,352 ft.

T. J. Gaughan's No. 1 Cartier, 330 ft. S and E, NW cor. SE SE Sec. 25-13-18.
P.B. to shallow depth.

UNION COUNTY

Alice-Sidney Oil Co.'s No. 9 E. F. Gregory, 330 ft. N and E, SW cor. NW SW Sec. 11-17-14.
Drlg. 2,780 ft.

J. E. Crosbie, Inc.'s No. 1 W. E. Gregory, 330 ft. S and E, NW cor. NE Sec. 15-17-14.
T.A. 3,503 ft.

J. E. Crosbie, Inc.'s No. 2-A E. F. Gregory, 330 ft. N and E, SW cor. NE SW Sec. 10-17-14.
Derrick.

Durand Dev. Co.'s No. 1 Ezzell, 330 ft. S and W, NE cor. Sec. 13-17-15.
S.D. 2,851 ft.

H. L. Hunt's No. 11 J. D. Gregory, C NE SW SE Sec. 10-17-14.
Testing 3,399 ft.

E. R. Henderson's No. 2 Vines, NW cor. SW SE Sec. 29-18-14.
Testing 2,155 ft.

H. L. Hunt's No. 15 E. F. Gregory, 330 ft. N and W, SE cor. Sec. 10-17-14.
Drlg. 3,980 ft.

H. L. Hunt's No. 18 E. F. Gregory, 330 ft. N and E, SW cor. Sec. 11-17-14.
Location.

T. L. James & Co.'s No. 1 Gregory, 330 ft. S and W, NE cor. N½ NW SW Sec. 10-17-14.
Testing 3,395 ft.

Mrs. R. K. Jones et al's No. 1 Davis, 330 ft. N and W, SE cor. NW NW Sec. 28-16-14.
Set 7-in. 2,746 ft.; T.D. 2,765 ft.

Lion Oil Ref. Co.'s No. 6 H. L. Rowland, 330 ft. S and W, NE cor. Sec. 15-17-14.
S.D.; W.O. 2,427 ft.

Marine Oil Co.'s No. 7-A W. B. Thompson, 330 ft. N and W, SE cor. SW SE Sec. 3-18-13.
Derrick.

Monroe Prod. Co.'s No. 1 Z. Bolinclair, 330 ft. S and W, NE cor. Sec. 16-17-14.
Drlg. 2,970 ft.

C. H. Murphy's No. 1 Union Saw Mill Co., 330 ft. N, SE cor. NW SE Sec. 29-18-11.
S.D. 2,950 ft.

C. E. Murdock's No. 8 J. M. Gregory, C NW NE SE Sec. 10-17-14.
Rigged up and S.D.

C. E. Murdock, Inc.'s No. 7 J. M. Gregory, 330 ft. N, 330 ft. W, SE cor. NE SE Sec. 10-17-14.
Swabbing 3,383 ft.

C. E. Murdock's No. 1 R. Pumphrey, C SW NW NE Sec. 11-17-14.
Derrick.

Reuter Oil Co., Inc.'s No. 1 J. L. Kinard, 330 ft. S and E, NW cor. SE NW Sec. 32-18-14.
Pumping 2,139 ft.: no gauge.

Geo. L. Pace's No. 1 Union Saw Mill Co., 330 ft. S and W, NE cor. NE SW Sec. 24-18-12.
S.D. 1,710 ft.

S. H A. Oil Co.'s No. 5 Taylor, Sec. 10-17-14.
Drlg. 2,120 ft.

Skelly Oil Co.'s No. 7 Perdue, 330 ft. N and E SW cor. SE NW Sec. 10-17-14.
Drlg. plug 3,354 ft.

Grady Vaughn's No. 1 T. B. Rowland, 330 ft. S and E, NW cor. Sec. 14-17-14.
Derrick.

WOODRUFF COUNTY

L. P. Lively's No. 1 Perkins, 330 ft. N, 360 ft. E, SW cor. SE SE Sec. 5-5n-2w.
Rigging up.

J. N. Watkins et al's No. 1 Upshaw, 330 ft. N and E, SW cor. S WSec. 17-5n-2w.
Rigging up.

MISSISSIPPI
AMITE COUNTY

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e.
S.D. 550 ft.

BOLIVAR COUNTY

White & Jones' No. 1 Bailou, SE SE NW Sec. 17-24n-7w.
S.D. 20 ft.

CLARKE COUNTY

Clarke County Oil Co.'s No. 1 Dora Butler, C SW SW Sec. 15-3n-16e.
Set 10-in. 63 ft.

HARRISON COUNTY

Big Ridge Oil Co.'s No. 1 Hinzin, NE Sec. 13-7s-10w.
S.D.; W.O. 1,100 ft.

ISSEQUENA COUNTY

Pelican Oil & Gasoline Co.'s No. 1 Martin & Bender, 300 ft. S and E, NW cor. Sec. 11-12n-8w.
S.D.; curing titles, 3,227 ft.

JONES COUNTY

Snow-Black Pet. Co.'s No. 2 Watson, 530 ft. W, 200 ft. S, C Sec. 24-7n-13w.
T.A. 3,900 ft.

LAUDERDALE COUNTY

Bob Dalton's No. 1 Bounds, Sec. 34-7n-15e.
Set 10-in. 560 ft.; S.D.; W.O.

MONROE COUNTY

P. J. McAlpine's No. 1 Frank Rye, Sec. 15-15s-17w.
S.D. 2,910 ft.

P. J. McAlpine's No. 1 Crook, 1,090 ft. S 90 ft. W, NE cor. Sec. 15-13s-13w.
Arranging to set 6-in. 1,514 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, SW cor. SW SE Sec. 24-2n-9e.
Partly rigged up and S.D.

WASHINGTON COUNTY

Perkins & Dees' No. 1 Lee, 1,500 ft. E, 500 ft. N, SW cor. Sec. 33-15n-3w.
Set 10-in. 300 ft. and S.D.

WINSTON COUNTY

Jack Vale et al's No. 1 Moody, 713 ft. N, 667 ft. E, SW cor. NW SW Sec. 3-13n-14e.
S.D. 785 ft.

La.-Ark. Proven Fields

NORTH LOUISIANA
CADDO—BLANCHARD

Louana O. & G. Co.'s No. 1-B W. M. Hammond, 660 ft. S and W, NE cor. SE Sec. 5-18-16.
Dry and abd. 957 ft.

CADDO—HOSSTON

Shoreline Oil Corp.'s No. 44 Crystal, 220 ft. S and E of C Sec. 13-21-16.
Derrick.

SABINE PARISH—ZWOLLE

Alexander & Crane's No. 1 Fogman, SE cor. N½ SW NE Sec. 18-7-11.
S.D.; W.O. 2,373 ft.

Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 12-7-11.
S.D. 2,120 ft.

Crichton & Co.'s No. 1 Williams, 660 ft. N and E, SW cor. SW SE Sec. 6-7-11.
Dry and abd. 2,762 ft.

Foster & Hartman's No. 1 Bowman Hicks, 330 ft. S and E, NW cor. NE Sec. 10-7-12.
Dry and abd. 2,696 ft.

E. D. Holcomb's No. 1 Porter, 330 ft. S, 220 ft. W, NE cor. SE Sec. 7-7-11.
Pulling liner 2,530 ft.

H. C. Maulding's No. 1 Davis, 350 ft. N and W, SE cor. NE NE Sec. 2-7-11.
Rigging up.

H. C. Maulding's No. 2 DeLatin, 330 ft. S and E, NW cor. NE SE Sec. 3-7-11.
S.D. 2,250 ft.

K. C. Peterson et al's No. 1 Bowman-Hicks, 330 ft. S and E. NW cor. SW NW Sec. 3-7-9.
Derrick down.

Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr. Co., Sec. 3-3-12.
S.D. 2,742 ft.

EAST TEXAS (BORDER COUNTIES)
HARRISON COUNTY

R. C. Payne et al's No. 1 Lowery, E. D. Spain Sur.
P.B. to 3,524 ft.

MARION COUNTY

Ed S. Holman's No. 1 Henderson, R. Bennington Sur.
Drlg. 1720 ft.

PANOLA COUNTY

R. H. Davis' No. 1 Wooten Est., Winnie Mann Sur.
Cmtd. back and testing.

Givens & Holloway's No. 1 Wooten est., Winnie Mann Sur.
T.A. 3,153 ft.

R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Set 10-in. 64 ft.

Fred Stovall Drlg. Co.'s No. 1 H. D. Ivey, P. Martin H.R.S.
S.D. for csg. 1,980 ft.

Thomason Drlg. Co.'s No. 1 Cadenhead, Jas. Smith Sur.
Rigging up.

SHELBY COUNTY

Cliff Stovall's No. 1 Pickering Lbr. Co., C H. Patterson Sur.
S.D.; rig repair, 1,485 ft.

O. P. Bush, trustee's No. 1 Pickering Lbr. Co., P. W. Harvey Sur.
S.D. 730 ft.

ALABAMA
CONECUH COUNTY

Ray L. Eastabrook's No. 1 Miller Mill Co., W½ NE Sec. 1-4n-12e.
Arranging to set 9-in. 1,006 ft.

COVINGTON COUNTY

Geometer Prod. Corp.'s No. 1 Culbreath, SW cor. SW NE Sec. 3-2n-14e.
S.D.; W.O. 1,000 ft.

HOUSTON COUNTY

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e.
S.D.; W.O. 2,506 ft.

LAMAR COUNTY

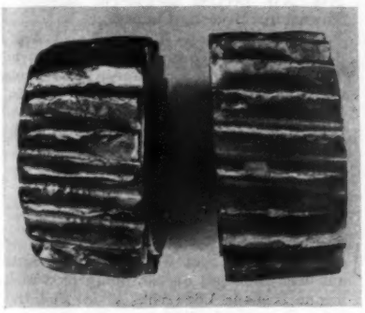
DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 23-15s-16w.
S.D. 4,182 ft.

NEW AND IMPROVED EQUIPMENT

Hard Facing Rod for Bits and Reamers Is Developed

A new hard facing rod for bits and reamers announced by the Armite Laboratories, 1900 East Sixty-fifth Street, Los Angeles, Calif., is said to embody exceptional qualities.

According to the Armite Laboratories,



No. 1 No. 2

this rod for acetylene use is comparable in hardness to diamond inserts. It has remarkable covering power and forms an armor which in actual operation resists wear to a degree formerly regarded as impossible.

This new rod, the producers say, forms a perfect weld to the parent metal, and is completely melted by the acetylene flame.

The accompanying illustration from an unretouched photograph shows two cutters from the same rock bit after a run in hard rock. No. 2 was faced with the new Armite "K" rod. It is seen to have maintained a greater diameter and sharper edges without chipping.

In facing drag bits the saw tooth effect is said to be easily accomplished by first cutting shallow grooves, then filling with this new metal.

BUNGHOLE LIGHT VAPOR-PROOF

Clear-sighted inspection of barrels and drums without the hazard of ordinary hand lamps made possible through a new type of vapor-proof inspection light, announced by the Pyle-National Co., 1334 North Kostner Avenue, Chicago, especially designed to permit insertion through standard bungholes 2¼-inch diameter and larger.

Protection to lamp and lamp socket is provided by the use of a sealed glass tube within the slotted brass guard. A spiked cap seals one end of the tube and vapor-tight socket housing the other end. The lamp socket is of weather-proof molded bakelite type with a threaded shank that screws into the socket housing. A strain relief bushing at the end of the pipe handle protects the cord outlet.

EXPANDING ORGANIZATION

H. K. Browning, sales manager of the S. M. Jones Co., has moved his family to Tulsa, where the sales department is now located in enlarged quarters in the McBirney Building.

The field organization is being reorganized and enlarged. Mrs. Estelle Flud, for several years in the Tulsa office, continues in the position of office manager.

"Pointed Wellpoint Facts" is the title of a bulletin prepared by the Griffin Wellpoint Corp., Lincoln Building, New York, describing the "Jet 'n Drive" wellpoint, designed to penetrate gravel and hard subsoils which resist single-jet (nozzle) stream types.

Notes About Trade Literature

A bulletin giving detailed information concerning the U. S. Varidrive motor, an improved development in variable speed will be sent on request by the U. S. Electrical Manufacturing Co., Los Angeles, Calif.

American Meter Co., 60 East Forty-second Street, New York, released a new catalog and instruction bulletin on the metric indicating flowmeter in the new 8½x11" size for adaptation to the company's loose-leaf binder. The number is E-3.

The 1935 calendar distributed by the Cooper-Bessemer Corp., Mount Vernon, Ohio, maintains the artistic standard set by its predecessors.

In its January issue Oxy-Acetylene Tips, published by the Linde Air Products Co., New York, prints an interesting article on "Pipe-End Cutting by Machine."

Yarnall-Waring Co., Chestnut Hill, Philadelphia, Pa., has for distribution a circular giving detailed information on the Yarway eye line indicator, particularly useful for high boilers.

Copies of a brochure, "A Ripple That Became a Tidal Wave, the Story of Canned Oil," are available to interested companies by writing to Sprague-Sells Corp., Hoopeston, Ill.

Bulletin No. 70, describing the new indoor forced-draft cooling towers put on the market by the Binks Manufacturing Co., 3114 Carroll Avenue, Chicago, may be obtained by sending a request to that company.

Among articles of oil interest in the January number of The Water Tower, published by the Chicago Bridge & Iron Works, Old Colony Building, Chicago, is one on the use of breather and pontoon roofs on tanks installed by the Vacuum Oil Co. in France.

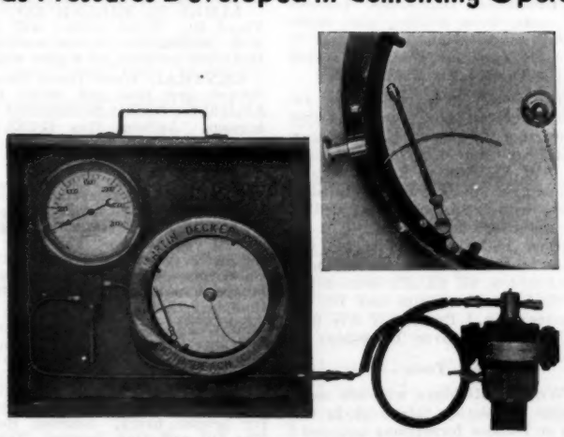
The Fisher cycle regulator for intermittent flow of control is the subject of a bulletin (No. 80B) obtainable from the Fisher Governor Co., Marshalltown, Iowa.

The January 1 issue of the Bridgeport Bulletin, published by the Bridgeport Machine Co., Wichita, Kans., contains an insert devoted to rebuilt pumping engines.

A 10-page bulletin sent on request by the Everstick Anchor Co., Fairfield, Iowa, describes and illustrates Everstick anchors, made from certified malleable iron.

An enlarged but compact 1935 catalog of the Chaplin-Fulton Manufacturing Co., 28 Penn Avenue, Pittsburgh, Pa., is illustrated and provided with charts and tables. The types of regulators described cover all the more common forms of service for both natural and manufactured gas. The availability of special regulators for many special purposes in the use of steam, water, oil and air is made plain.

Records Pressures Developed in Cementing Operations



Martin-Decker Corp., Long Beach, Calif,. announces an instrument for recording pressures developed during cementing operations. The device, of 3,000-pound capacity, contains a clock which turns the chart one revolution in four hours. In order that a legible record may be obtained the chart-driving mechanism turns faster than most recording devices and may be started and stopped at will by the operator.

When the truck is ready to run cement the clock is wound up, a new chart placed upon the recorder and the zero line placed at the point of contact of the fountain pen. As soon as the cementing operation is started the operator simply pulls out the knob on the side of the instrument. Automatically the pen is dropped on the paper and the clock starts. A record of the pressures encountered and the length of time required to put the cement away is then plotted. To eliminate pulsation the recording gauge has a pulsation damper attached.

Both the indicating and recording instruments are mounted securely in a special steel box. These boxes are mounted on the back of the cabs, or in the most convenient place on the truck.

On the back of the recording chart is provided space for writing down valuable information, such as the number of sacks of cement, the amount of water used; the quantity of chemicals, if any; the size of casing, and such other information as may be needed for future reference.

Men Well Known in the Equipment Field

R. R. Bloss, vice president of the International Stacey Corp., Columbus, Ohio, is in charge of the International Derrick & Equipment Co. division of that organization. He has been connected with the oil well equipment business and the development of oil well machinery for over 15 years. He was one of the pioneers in introducing to the oil industry the angle iron steel derrick, now used throughout the world. He is directly responsible for the development of the "crank counterbalance," Ideco geared units and other Ideco products.

R. R. BLOSS

New Type Cooling Tower Put on Market by Binks

The Binks Manufacturing Co., 3114 Carroll Avenue, Chicago, has placed on the market a complete line of indoor forced-draft cooling towers. Eight different sizes of Binks indoor towers now are available, ranging in capacity from 5 to 50 gallons per minute circulation. They are recommended for the cooling of condensing and circulating water for various types of refrigeration equipment and other industrial processes.

The tower housing is constructed of a heavy-gauge galvanized copper-bearing steel material, provided with interior air deflectors, insuring uniform air distribution through the tower from the fan unit. The fan which provides the air circulation is made entirely of aluminum alloy.

Warm water is delivered to the tower from the condenser or other process to a system of Binks patented "Rotojet" clog-proof nozzles, arranged to provide maximum water breakup and distribution under low pressure, to insure maximum cooling effects.

The smallest two sizes, 5 and 10 g.p.m. capacity, are furnished as a complete self-contained unit, and the larger sizes are made up in sections conveniently assembled on the job. All sizes of towers are furnished complete with fan and fan motor, together with water circulating pump where desired.

Tank Car Prices Soften in the Chicago District

(Continued from Page 81)

ing through on high grade kerosene now and the jobbing trade is evincing advance interest.

Heating Oils

High grade distillates are among the products which have been easing a trifle, prices having been shaded by various sellers to the extent of small fractions. Buying has not been all that some interests looked for and some sellers have been willing to make slight concessions. The retail price structure is reported fairly firm. High grade gas oils are still rather scarce.

Heavy Fuels, Gas Oils

Industrial fuels and gas oils are quiet at this time but there is an undertone of firmness which is keeping the price structure steady. Demand has been spotty but on the whole seems to be better than it was a few weeks ago, as some consuming industries expand their takings.

Coke

The petroleum coke business has been fairly good with offerings generally well absorbed by buyers. The trade is awaiting results of the coming spring with a good deal of interest, to see how prices act when demand subsides.

Lubricants

Lubricants are mostly quiet. There is some spottiness with few knowing just what to expect. Cold weather motor oil business at retail has been fair.

Wax

Wax continues to show an uneven and slightly less strong market position. Demand is slow on the whole. Prices are quiet and unchanged.

Naphthas

A little evidence of spottiness also is coming into solvents and naphthas, although for the most part previously ruling prices still are maintained.

Gas Possibilities in St. Lawrence Valley

(Continued from Page 74)

ruary, 1933, finished six months late at 5,280 feet; and No. 2 at St. Gregoire, started in February, 1934, finished in October at 6,030 feet. Alberta Gas & Fuel Co., a Doherty subsidiary, had a joint interest in some of the later tests for which it brought a heavy duty drilling outfit with steel derrick from the Alberta fields.

In all these deep tests, gas was encountered in the Utica shales and in the Trenton limestone, but none of these shows was commercial. The tests, scattered over a considerable area, might indicate that if deep production exists, it is likely in small local structures. The tests have been so few, however, and general structural conditions and faulting are so obscured by the heavy overlay of drift, that even now it is difficult to give a definite opinion as to the prospects of this deep drilling area.

On the north shore of the St. Lawrence several shallow tests have been drilled between Montreal and Quebec cities. At Lanoraie, in Berthier County, the Lanoraie Oil & Gas Syndicate pioneered the development about 1929, and since then the Cartier Natural Gas Co. and the Carl M. Mohr interests have continued the development. At St. Vaiteur, also in Berthier County, the St. Paul Oil & Gas Syndicate did some drilling, as well as at St. Herin de Mascouche in L'Assomption County, scene of the first Quebec gas strike more than 50 years ago. Cartier Natural Gas Co., which took over the Lanoraie interests, has tests in progress at St. Hubert, in Chambly County, and at Lanoraie. In the latter areas the shallow drilling has resulted in several fair-sized gassers which apparently get their production from just below the contact of the overlying drift with the slightly bituminous Utica shales. A test drilled recently at Lanoraie by the Carl M. Mohr interests was carried deeper, to 1,200 feet, getting a flow of 15,000 feet a day. The producing horizon is apparently the Trenton limestone.

So far, the most promising results have been those on the north shore, particularly at Lanoraie. The individual gassers are comparatively small, but the shallow depth is a helpful factor; and there is a prospect that more extensive drilling will result in better producers either from the "drift" or from the upper horizons of the Trenton, which lies within 1,000 feet of the surface.

Administrator's Report on Crude Stocks

WASHINGTON, D. C., Feb. 4.—Stocks of domestic and foreign crude petroleum at the close of the week ended January 26 totaled 320,570,000 bbls., according to data compiled by the Bureau of Mines, Department of the Interior, for Petroleum Administrator Harold L. Ickes. In comparison with data for the previous week, this total represents a net decrease of 551,000 bbls., comprising decreases of 522,000 and 29,000 bbls., respectively, in stocks of domestic and foreign crude oil.

Current reports of the industry indicate that crude oil production showed a slight increase, the daily average for the week ended January 26 amounting to about 2,590,000 bbls., or 10,000 bbls. above the figure for the week ended January 19. Imports of crude oil declined to 61,000 bbls. daily, compared with an average of 75,000 bbls. for the previous week. Daily average crude runs to stills amounted to about 2,490,000 bbls., a decrease of about 45,000 bbls. from the average of the previous week. The estimated daily average balance of crude oil for the week ended January 26 was as follows (barrels): Production, 2,590,000; imports, 61,000; decrease in stocks, 79,000, equals runs to stills, 2,490,000; exports, fuel and losses, 240,000.

STOCKS OF CRUDE PETROLEUM, JANUARY 19 and JANUARY 26, 1935

(Barrels of 42 gallons)

Grade of crude oil—	Jan. 19	Jan. 26
Pennsylvania Grade ..	4,585,000	4,486,000
Other Appalachian ...	978,000	987,000
Lima-N.E. Indiana-Michigan	1,109,000	1,078,000
Illinois-S.W. Indiana .	11,491,000	11,434,000
N. Louisiana and Arkansas	9,604,000	9,513,000
West Texas and S.E. New Mexico	30,453,000	30,607,000
East Texas	29,049,000	29,623,000
Other Mid-Continent .	149,346,000	148,746,000
Gulf Coast	18,548,000	18,330,000
Rocky Mountain	27,527,000	27,505,000
California	34,674,000	34,494,000
Domestic crude	317,869,000	317,347,000
Foreign crude	3,252,000	3,223,000
Total*	321,121,000	320,570,000

*Represents approximately 98 per cent of total stocks in the United States, exclusive of producers' stocks.

Michigan Fields

(Continued from Page 60)

tion 7-14n-2w, Greendale Township: John Martin's No. 1 R. Greene, NE NE NE Section 13-13n-2w, Jasper Township, and Howard F. Patterson's No. 1 David Haskins, NW NW SW Section 25-13n-2e, deepened to the top of the Monroe after recent failure in the Dundee as a wildcat and last week shut down ready to run casing.

Two Broomfield Township, Isabella County, tests were nearing the Michigan Stray sands, while single tests in Denver and Isabella Townships were nearing the Dundee.

Two Broomfield tests progressing toward the Michigan sands with possible completion this week were the Michigan Cities Natural Gas Co.'s No. 1 William Cook, C SW SE Section 2-14n-6w, and same company's No. 1 Paul R. Lueder, C NE NE Section 14, both being drilled by J. C. Arthurs, contractor.

Two other Isabella tests nearing the Dundee were the Wittmer Co.'s No. 1 Hugh McLachlen, SE SE SE Section 11-15n-4w, Isabella Township, and D. W. Null, trustee's No. 1 Prout, SW SW SW Section 7-15n-3w, Denver Township.

Wildcat Tests

Four Western Michigan wildcats nearing possible completion this week in the Traverse or Dundee formations included: F. Irwin Bryan and Harry T. Martin's No. 1 A. G. Aldrich, NE SW SW Section 3-8n-11w, Plainfield Township, Kent County, drilling at more than 2,750 feet; Fischer-Robbins Oil & Gas Co.'s No. 1 fee, NE SW Section 14-24n-16w, Arcadia Township, Manistee County, drilling at more than 1,100 feet; Dragoon Development Co.'s No. 1 W. K. Young, SW NW NW Section 15-17n-15w, Logan Township, Mason County, drilling at 1,880 feet and the Bear Creek Oil & Gas Development Co.'s No. 1 John Fors, NE NE SE Section 29-3n-14w, Heath Township, Allegan County, casing in shale above the Dundee at about 1,600 feet.

Talbot Oil Co.'s No. 1 McPherson estate, NE NE NW Section 35-3n-4e, Howell Township, Livingston County, also was running casing at 4,790 feet, or not far above the Trenton limestone.

West Michigan Consumers Co. was about ready to abandon efforts to reopen the No. 1 John B. Nichols, SW SE NW Section 9-10n-16w, Muskegon Township, for Monroe gas production.

Glacial drift was giving operators in Gladwin County, prospective new producing area northeast of the Porter Township, Midland County Pool, considerable difficulty last week.

Sun Oil Co. decided to skid rig after landing drive pipe crooked at 330 feet in the No. 1 Mary Hines, C NW NE Section 31-17-1w, Tobacco Township, while the hole caved in the Roosevelt Oil Co.'s No. 1 Arnold Haviland, SE NE SE Section 4-17n-2w, Beaverton Township, after drive was believed landed at 297 feet. Operators believe they attempted to land the pipe too shallow in the latter test.

New Locations

Four new locations were included in the list of permits issued by the oil and gas division of the State Conservation Department from January 23 to 30.

Three gas tests were included, namely: W. J. Bernier's No. 1 Fred Sinclair, C NE NE Section 15-14n-6w, Broomfield Township, Isabella County; Guy M. Oberauer's No. 1 Lawrence Lovell, C SW NW Section 14, same township, and Gordon Oil Co.'s No. 1 Isabell Wood, C NW NW Section 29-13n-7w, Millbrook Township, Mecosta County.

L. G. Thompson's former No. 1 Vandercook permit for a test in Denver Township, Isabella County, was canceled and a new permit issued for the No. 1 William Price, NW SW NE Section 31-22n-3e, Churchill Township, Ogemaw County, a wildcat.

Kansas Fields

(Continued from Page 64)

and when swabbed produced 420 bbls. of oil and 30 bbls. of water in five hours, and was then put on the pump by which means it made 1,364 bbls. of oil and 130 bbls. of water in 24 hours.

Stafford County

Stanolind Oil & Gas Co. completed No. 1 C. J. Hayden, SW SE NW Section 31-22-11w, Stafford County, which flowed 880 bbls. in 24 hours, after an acid treatment in Siliceous lime at 3,535-49 feet.

CLASSIFIED ADVERTISING

Financing

JOHN MORRIS, Seventh Floor, 1237 Market Street, Philadelphia, will help float small deal. No stock selling. Send full facts in first letter.

JAMES E. MILLER CO., 207½ E. Third St., Tulsa, Okla., will co-operate with responsible parties seeking aid in financing projects of higher order.

CENTRAL West Texas Producer has opened new pool and wants to borrow $10,000 for further development of proven acreage. Address Box G-543, The Oil and Gas Journal, Tulsa, Okla.

Help Wanted

WANTED—A salesman handling other oil well specialties in the California field to handle a new safety tubing tong on liberal commission. This tong is meeting with large sales in Eastern field. Sales may be handled through supply stores. Address Oil Field Specialties Company, Lima, Ohio.

WANTED—High grade refractory salesman to represent us on straight commission basis, selling direct and establishing dealers and agents in restricted territories on complete line high grade Missouri products. Excellent opportunity for proper party. Address Box G-532, The Oil and Gas Journal, Tulsa, Okla.

Situations Wanted

Tech. grad. with 14 yrs. exp. in oil refinery design, construction, maintenance, and efficiency work, desires change. Address Box G-505, The Oil and Gas Journal, Tulsa, Okla.

ADVERTISING MAN with knowledge of producing, refining and marketing. Has 10 years' advertising experience with one of the largest electrical and mechanical machinery builders in the country. Can produce effective campaigns using direct mail, catalogs, magazines, displays, etc. Knows all trade papers thoroughly. Can fit into Oil Company, Machinery Builder, Supply House or Power Company, Advertising Department. Age 31, married, will go anywhere. Address Box G-550, The Oil and Gas Journal, Tulsa, Okla.

Equipment Wanted

WE ARE in the market for several strings of used heavy long joints three-inch drill pipe with tool joints on, also several strings four-inch. Must be in good condition. Advise price and location.
THE BRIDGEPORT MACHINE COMPANY
WICHITA, KANSAS.

WANTED Natural Gasoline Outfit, prefer 60 HP, direct driven, low stage, comp. with house and all connections. Address Edw. Agon, Box 2, Winchester, Ky.

For Sale—Maps

STATE OIL & GAS MAPS
Up to date drilling data on
10,000 WILDCAT WELLS
Kans., $6; Okla., $6; Ark., La., N.E. Tex., Gulf-S.W. Tex., West Tex. and Mont. $5 each; Panhandle Tex., Neb., So. Dak., Ala., Miss. and Wash., $2.50 each; Wyo., Colo., Utah and N. Mex., $3.50 each; Calif. $15.
CALIFORNIA MAP & BLUE PRINT CO.
1127 Story Bldg., Los Angeles, Calif.

Patent Attorneys

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form:
"Evidence of Conception,"
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

Wanted

Wanted—Financial Co-operation, development of 3,000 ac. blk.; Mich. shallow territory. Good prop. to responsible party. Write if interested and can invest. P. O. Box 67, Mount Pleasant, Mich.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

CLASSIFIED ADVERTISING

For Sale—Equipment

SPECIAL 20" PIPE BARGAIN

15,000 ft. of 20" Naylor Toncan Steel Spiral Weld Pipe 35 lb. weight. Pipe tested 375 lbs. Guaranteed same as new. Located Oklahoma City. For gas line or water line. With or without Victaulic couplings.

For Special Service write W. C. Berry or
SONKEN-GALAMBA CORPORATION
64 North Second St. Kansas City, Kansas.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Oster Pipe Threading Machine. Also, large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

60 MILES of 3" line pipe, like new. Part of pipe 9 lb. tubing, stencil marks still legible. Price 18c per ft. f.o.b. cars Clarksburg. Wright Brothers, Clarksburg, W. Va.

FIVE 300-amp. engine-driven Lincoln welders. Also stock of electric motor-driven welders. Service Co., 3732 Cedar, Cleveland, Ohio.

FOR SALE—Gaso Portable Pumping Unit, 3½"x10" powered with Continental motor. General Machine & Supply Company, Wichita Falls, Texas.

SECOND HAND CASING
All sizes. Complete Stocks New and Used drilling equipment.
IVERSON TOOL CO.
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FOR SALE—GAS METERS
150 25 lb. 60B Ironcase.
30 250 lb. 30B Ironcase.
List of other meters and prices on request. Geo. R. Milner, Okmulgee, Okla.

FOR SALE—Gasoline Plant (Not Gas)—Capcy. 10,000 Gal. Also 2—600 HP Cooper Gas Engines. 3 complete air lift plants. 1 187½ KW Steam Turbine Direct connected to generator. 1 75, 1 150 Fairbanks-Morse Oil Engines with or without generators.
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3004 E. Archer St., Tulsa, Okla.

FOR SALE—5'x15' and 7'x22' oil and gas separators. I. T. I. O. Company, Bartlesville, Oklahoma.

Incorporations

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

DELAWARE CHARTERS—Fee small; submitted forms. Chas. G. Guyer, 901 Market Street, Wilmington, Del.

Leases—Production

OFFSET leases and royalty in the new Jackson County, Oklahoma, play. Hub of the State's new development in shallow production. Write for particulars. G. E. Fisher, 518 Key Bldg., Oklahoma City, Oklahoma.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, N. Mex.

WANTED good drilling block of leases. Give geology on or other reasons for production and all particulars in first letter. Address P. O. Box 142, Tulsa, Oklahoma.

WILL lease 70 ac. 18-6n-2w and 100 ac. 11-6n-3w, McClain County, Okla. Joe P. Crawford, fee owner, Okla. City, Okla.

For Sale—Equipment

Leases—Production

GUSHER FIELD
5,000 acres new ⅞ths, form 88 leases, Eastern part Grenada County, Mississippi for 3,500 foot well, unless shallower production. Two years free time, low rentals, near railroad. Good structure. A real opportunity for responsible party. Write P. R. Kohlheim, Tennessee Hotel, Memphis, Tenn.

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RIO Grande Valley Leases, Royalty, low price, near 4 completions. Huge activity planned, better hurry 50-1 chance for quick money. L. F. Bassett, Zapata, Tex.

HAVE a party who will give drilling contract on 20 acre lease, also a 11 acre lease in Chase pool in Rice County, Kansas. R. A. Ward, Alden, Kansas.

PRODUCING LEASE INTEREST, BUCHANAN POOL
We offer subject to our confirmation ¼ working interest in a 30 acre lease, part of Medlen fee, Buchanan Pool, Caldwell County, Texas. One well, initial production 1050 barrels daily, Magnolia purchasing oil. This interest earned $2249.00 in 1933, $2785.00 in 1934, price $11,140.00. December, 1934, income $236.26. Federal Trade Offering Sheet furnished on request. Write or wire for further information.
J. F. MARION OIL COMPANY
MAGNOLIA BUILDING
DALLAS, TEXAS.

Coastal Louisiana Leases, blocks, royalties in this very active area bought and sold. 208 Weber Bldg., Lake Charles, La.

Royalties—Production

ROYALTIES producing and nonproducing in Kansas, Oklahoma and Texas. James R. Haynes, Grantville, Kansas.

Royalties—Production

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MONTHLY PAYING ROYALTIES
Quoted Dealers Exclusively.
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Suite 812, Palace Bldg., Tulsa, Okla.

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for dealers.
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HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood. P. O. Box 2261, Tulsa, Okla.

Producing Oil Royalties
at wholesale.
ROBERT L. KINKAID, INC.
Petroleum Bldg., Oklahoma City, Okla.

KANS., Okla., Tex. Producing Royalties. Also spreads under drilling wells. Merit Royalties, R No. 3, Topeka, Kans.

Producing Oil Royalty, listed under Federal Security Act, paying monthly income in half acres and upwards at reasonable prices. P. O. Box 35, Tulsa, Oklahoma.

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Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. Complete set of Forms and Reports for filing with Securities and Exchange Commission accompanies every order. Inquiries invited.
B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

NEW OIL WELLS and new locations is putting the old time feeling back in this part of the Texas panhandle. I am giving my clients, new and old, the same dependable help that I have given them for the past thirty years in this place in Oil land and other investments.
E. B. REEVES
(Investments)
Alanreed, Gray County, Texas.

Low priced leases Royalties near Permian Basin. Wildcats being drilled by Majors and Independents. 50 to 1 chances quick money. E Croft, Proctor, Texas.

PRODUCING OIL ROYALTIES
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Inquiries invited from Oil Companies, Bankers, Dealers.
M-K OIL COMPANY, INC.
20 Broad St. New York.

Royalties—Production

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

Income Producing Royalties
Mid-Continent Field
Harry A. George
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EAST TEXAS AND VAN POOL
PRODUCING OIL ROYALTIES.
We Buy and Sell.
E. T. MARION REAL ESTATE CO.
407 Southwestern Life Ins. Bldg.
Dallas, Texas.

LAND in Fee, All royalty close in. 10 Acres up. Near new locations. Owner, Geo. W. Seckman, Edmond, Okla.

PRODUCING OIL ROYALTY,
BUCHANAN POOL
We offer subject to prior sale 7½ royalty acres, 30 acre lease, Medlen Farm, Buchanan Pool, Caldwell County, Texas. One producing well, earned $279.00 in 1933, $397.00 in 1934. Base price $265.00, total consideration $1985. December, 1934, income $33.75. Advise if interested in purchasing. Federal Trade Offering Sheet furnished on request.
J. F. MARION OIL COMPANY
MAGNOLIA BUILDING
DALLAS, TEXAS.

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Bought — Sold — Wholesale.
W. R. Brown & Co., Inc.
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J. A. WOLF AND COMPANY
105 West Adams Street
Chicago, Illinois
Dealers in Oil Royalties since 1918.

ELIMINATE all dry wells. Many offsets can be improved. Wells located in heart of pool. Salary and percentage basis. Only parties or companies capable of developing need answer. P. O. Box 15, Springfield, Missouri.

UNUSUAL DISCOVERIES at shallow levels being made in Archer and North Young Counties, Texas. I have several Blocks on good geology and desire to sell interest or acreage. Desire communicate with parties wanting to get in on new production.
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915 Hamilton Bldg.,
Wichita Falls, Texas.

EAST TEXAS
PRODUCING OIL ROYALTY
We offer 4 Royalty acres Calvin Brown fee McCurry and Outlaw Surveys, Gregg County, Texas, at $1250. Base Price. There are 10 wells. Arkansas Fuel Oil Co. operating. December check $48.70. Firm bids close to quoted price will be considered.
E. T. MARION REAL ESTATE CO.,
407 Southwestern Life Ins. Bldg.,
Dallas, Texas.

Wanted—Producing property or proven acreage, from owner direct. Not for resale or brokerage. P.O. Box 87, Yale, Okla.

I STILL HAVE good producing royalties in Van and East Texas. Will sell on five days' draft anywhere with full reports and, etc. Will buy royalties in Texas and Oklahoma. Own and will sell twenty-acre lease in Upshur County, East Texas Field, offsetting good well that came in January 24th. Must be drilled within ninety days. Details on application. Also have for sale unproven, non-producing royalties under major companies, very reasonable. P. R. Knickerbocker, 3237 Westminster, Dallas, Texas.

TO DEALERS ONLY
We offer Terrell County, Texas, oil royalty as follows: 2/32 royalty interest equal to 2/256 of total production, consisting of 40 royalty acres at a price of $5.50 per acre, total consideration $220. Legal description set forth in offering sheet, which will be furnished on request and geological structural map will be furnished purchaser.
J. F. MARION OIL COMPANY
MAGNOLIA BUILDING
DALLAS, TEXAS.

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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

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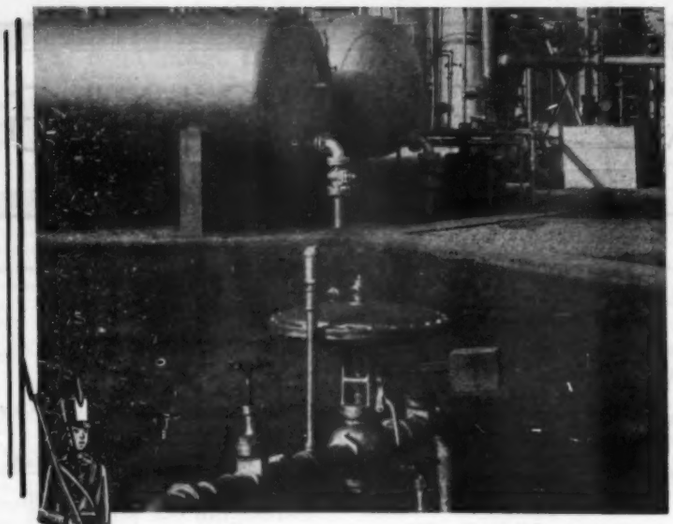

On Guard!

A line carrying natural gas from the field to a large oil-company plant delivers the gas at an even pressure, in all weathers and at all seasons, because Fulton Regulators are on guard. Nothing unusual! Our illustration is like the picture of a sentry on guard, doing methodically what he has been trained to do well. Fulton Regulators have been serving all the requirements of pressure control, in the gas industry and elsewhere, for fifty years.

The Chaplin-Fulton Manufacturing Company
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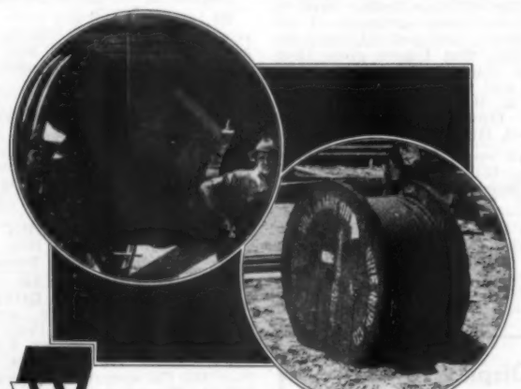

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Drillers, superintendents and all others who are responsible for their equipment know from experience that a good line is an all important factor in arriving at perfect drilling results.

This great Williamsport plant, devoting its engineering and manufacturing facilities entirely to the continued perfection in making wire lines that stand up, invites you to enjoy the pleasure that comes from their use.

You too will gladly give your preference to these lines after once using them.

WILLIAMSPORT
WIRE ROPE COMPANY

Main Office and Works: **Williamsport, Pa.**

Branch Sales Offices: **122 S. Michigan Ave., Chicago, Ill.**
Oil Country Sales Offices: **Williamsport Bldg., Fourth and Midland Valley Tracks, Tulsa, Okla.; 1516 Chestnut Street, Houston, Texas. Mid-Continent Supply Co., Distributors in Texas, Louisiana and Arkansas.**

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